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ANEMONE CORONARIA,
GARDEN VARIETIES.



SEPTEMBER, 1888.

APPLE ORCHARDS are receiving somewhat increased attention throughout the country. For some years past there has been comparatively little planting of the Apple, for in good bearing seasons the supply has been too great for the demand, and many orchards are now much neglected. The prospect, however, is that there will be use for all of this fruit that our orchards produce, and the careful planting in the best manner of small orchards appears to be advisable, as by the time they commence to produce fruit the present state of over production will undoubtedly be adjusted; many of the present orchards will have been allowed to go to decay, and the increased population will strengthen the demand.

We have lately received from the Secretary, the *Report of the Fruit Growers' Association of Ontario*, of last year, in which we find that at the summer meeting the subject of Apple orchards and the care of the fruit received very complete attention. As the statements and opinions there advanced were by men whose judgment and experience are entitled to our highest esteem, this subject can probably in no way be better laid before our readers than by giving the principal remarks there made on the salient points.

The President, A. MCD. ALLAN.—In the course of this discussion one point has been settled in my mind; that is the

necessity for thorough underdraining. In all the localities in which the speakers were uncertain on this point it seems to me that it is a necessity. I think it would be pretty hard to find a tract of land where underdrainage would not do some good, and even on the rolling land where you are successful you would be still more successful—your trees would be healthier and the fruit finer if a thorough system of underdrainage were adopted.

BEST MODES OF GATHERING APPLES.—Col. MCGILL.—We sell our orchards by the barrel and gather our own Apples. We gather them with a ladder, into a basket holding about half a bushel, and put them into the barrel carefully as we gather them, always taking care to gather them when dry.

The SECRETARY.—I suppose we all follow very much the same plan Col. MCGILL has described, using a ladder and a basket. I have found it a very good idea to have spikes in the bottom of the ladder, which is a great help in raising it, and will give it a good hold in the ground. A long ladder is apt at times to slide, and I have found these spikes a great convenience. I have tried several modes of gathering my crop; sometimes we have gathered them into a number of baskets and carried them in doors where we had lots of room, and packed them there on the floor, but of

late, I have practised gathering them immediately into barrels in the orchard. I have also tried leaving them in piles, but that I found productive of a good deal of trouble. Lately, as I have said, I have tried this picking them immediately into the barrel, and heading them up, taking them into a cool place and leaving them there on their sides. Then when the packing time comes, late in the season, I empty them out two barrels at a time upon a packing table or upon straw on the floor. I have been using a packing table about twelve feet long with sides all around it, and an inclination so that the Apples will be disposed to roll toward me. Two persons can very easily empty out a couple of barrels on this table and throw out the poor specimens, and so, quickly cull them over, separating them into the different classes, and putting them into the barrels and marking them according to their grade. I think that, generally speaking, is one of the most satisfactory methods I have tried. The only difficulty is that if the weather is very close in the place where they are stored—if it is not cool enough—they are apt to ripen a little faster than if left in heaps on the grass or some other such place.

BEST MODES OF PACKING APPLES.—
THE PRESIDENT.—Choose a solid place on the ground and place a barrel upon a solid piece of plank. Lay the first course of Apples with the stem end down. The packer should not take special samples for this course, but just take them as they come, and place them so as to make a solid row on the bottom. The next row also should be put in carefully, with the blossom end down. The barrel should be carefully shaken down on that solid plank after each basketful. When the packer comes to the top of the barrel he evens them off according to the variety. One variety will press down closer than another, and that is where a little judgment and experience is required. A man must know every variety he is packing in order to know how many to put in the barrel; whether he will fill it to the chine, an inch above the chine, or even further. Then the last row has to be placed so as to be in an oval position before you put the press on, with the stems up, so that when you put the press on they will press down evenly and level, and afterwards on open-

ing the barrel you cannot tell which end you commenced at. That is a barrel packed properly, and it will carry, and carry thoroughly. If the Apples before packing have been what we call sweated—and the best place to sweat Apples is on the ground, they should, if possible, remain on the ground for a week after being picked from the tree—they will carry much better. Of course, in wet weather they are better taken in to the barn floor or some other convenient place, but as a rule they should remain for a week or ten days after being picked; the skin toughens in that time. I find quite a difference in the Northern Spy, which has such a tender skin, in places where they are left on the ground to toughen and get through this sweating process—they will carry much better. Before packing, the first thing to do is to make up your mind how many grades you are going to have in the pile from which you are packing. There will be two grades at least, and the chances are, not more than three. For instance, take a Baldwin grown on the inside of a tree, that is apt to be rather green. That will be one grade. All the medium sized Apples—have them all the one size as much as possible—and pretty high colored, that is another grade. Grown at the top of the tree or on the outside limbs Apples will be much smaller, but high in color. That will be your third grade. A barrel of Apples when opened should be all as near of the one size and color as it is possible to have them. If you pack your barrels in that way, and brand them accordingly, the buyers in Britain and elsewhere will soon get to know that that brand represents well selected, honestly packed Apples, and the result will be that they will pay a fancy price for it. The price is not so much of a consideration with them as it is to get the very best article.

BEST MODES OF STORING APPLES.—
THE PRESIDENT.—I believe the only secret about the whole matter is to select a cellar sufficiently cool. If you are under freezing point it is sufficient. Apples will stand a good deal more than Potatoes or any other vegetable. The cellar must be dry, however—dry and cool; and see that your Apples are without spot or blemish. It might be well in handling them in the following spring if you find a

barrel that looks suspicious in any way, to open it in case of any decay from natural causes. They will show it by becoming a little slack, or by wet through the barrel. I believe myself that this system of storing is bound to gain ground largely in this country, because by our present system of shipping the fruit the moment it is packed you are shipping fruit for two seasons, whereas if you ship only the varieties required for immediate sale on the market, and hold back the long keeping varieties for a later season, you will find the prices much better. For instance, such Apples as the Mann or Russets should not be shipped until on toward the spring of the year, and with our present arrangements we can ship all winter without danger of frost. Take them to a station on a moderately mild day, and the moment they are in the car they are safe.

CULTIVATION OF THE ORCHARD.—Mr. BEALL.—The cultivation of the orchard, in my opinion, commences a year before the trees are planted. As has already been remarked to-day, by the President, it is a most important matter that the land should be thoroughly drained.

The soil for an orchard should be as thoroughly prepared as if a man were going to put in a crop of Wheat. This should be done near the fall of the year, and I would also advise that after the land has been thoroughly prepared as for a Wheat or any other crop, that during the middle of October, when the land is dry, it should receive still another plowing, and that that plowing should be done in such a way that the open furrow will be left exactly where the row of trees is to be. I am supposing, of course, that a man is putting out a pretty large orchard—say of two hundred trees. The furrows, then, should fall exactly where the rows of trees will be, and these furrows should be left open during the winter. The main object in that is to facilitate the planting of the trees in the spring. After the land is prepared the next thing is to select your varieties, and in respect to that point I think there is an erroneous idea current. What has been said here before to-day, that the fewer the varieties a man plants the better for profit—provided, of course, that these are well chosen—is, in my opinion, correct; certainly the number of varieties should be small, one or two, or at most

three. I consider this a very important point, because when a man has too many varieties he will find difficulty in finding a purchaser for them, and a large portion of them will probably be wasted. * *

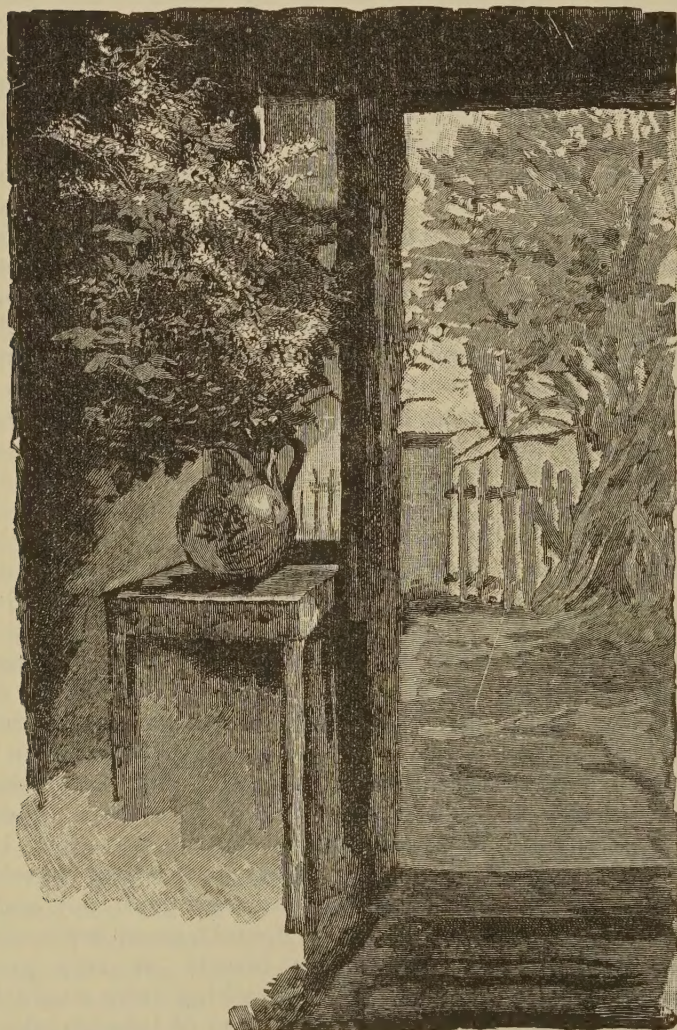
Then in the spring, if the land has been prepared in the way I have described, there will be no necessity for digging pits in which to place the roots; the furrow will be sufficiently deep, except, perhaps, a shovel or two of loose earth to be taken out. The earth which was thrown up from this furrow in the fall will have become so beautifully pulverized that it will fit around the roots very nicely indeed in the spring. I am satisfied that two men can plant more trees in one day by this method than they could in a week following the ordinary plan. After the trees are planted the cultivation of the orchard should consist altogether in the raising of root crops of some description. A crop of Corn is a very good thing, I think, because it shelters the trunks of the trees the first year, a time when they specially need shelter from the sun. For the first eight or ten years I would recommend that nothing but hoed crops of some kind should be grown, and during that time no grass should be allowed to grow around the roots of the trees. Where no grass is allowed to grow there will be no loss from mice girdling trees. The next important consideration is to keep the trees clean, that is, free from insects. Of pruning I shall say nothing, because I believe that is the subject of a special discussion. I may say, however, that when a man has his trees planted he should be able to do his pruning with his finger and thumb, or nearly so. The trees are liable to the ravages of insects of various kinds, and the bark should therefore be kept thoroughly clean. Alkaline washes, perhaps, are the best preventive of diseases of that kind that can be found. Let this be done early in the year whether the trees seem to need it or not, and I think it will be found a great preventive of damage by insects. A very good preparation for washing trees would be soft soap, or a mixture of tobacco juice—taking care not to make it too strong—which is very effectual in preventing the growth or spread of the aphids.

FERTILIZERS FOR ORCHARDS.—Extract from a paper by T. H. HOSKINS, M. D.—If the land chosen for an orchard is but

lately cleared, or if long tilled, has been so farmed as not to impair its fertility, no special preparation is needed before setting the trees. But if, though naturally suitable, it has been cropped to an extent impairing its productiveness of tillage crops and grass, its best condition should be restored as completely as possible. The promptest, cheapest and most effective means of doing this is to dress it heavily with coarse ground bone and unleached hardwood ashes, sown upon the surface and plowed in. One thousand pounds of the bone, and one hundred

bushels of the ashes to the acre is none too much. It would be profitable, in the long run, to double this quantity at the beginning. Such a dressing is far preferable to one of any sort of stable manure, or vegetable compost. Any land upon which water stands more than twenty-four hours after a rainfall, however heavy, is not fit for an orchard without thorough tile-draining, and is not safe even with it, because there is always the risk of the tiles being obstructed with roots, and the trees becoming unthrifty in consequence.

AN AUTUMN DAY.



O, autumn day, you are so fair,
With peace in earth and sky and
air.

It seems the best life of the year
That is outspread about me
here—

Like a full draught of rarest
wine,
Rich with the life-blood of the
vine.

Sweet autumn day! I see afar
The blue peaks where the moun-
tains are;
Like something born of vaguest
dreams
The far-off hills' high summit
seems,
Wrapped round with haze of
purple tint,
Through which the golden sun-
beams glint.

The sounds of life are faint and
few;
A brown thrush flies athwart
the blue
Of this most fair autumnal sky,
And some late bees drone slowly
by,
And from afar, as echoes come,
I hear a partridge beat his drum.

The torches of the Golden Rod
Light up a leaf-besprinkled sod,
And purple Asters, shy as sweet,
Are blowing at the Sumach's
feet.

O, world, you are most fair to-
day
With beauty whispering of de-
cay.

O, autumn day, if it might be
That you could tarry here with me—
If I could drink your royal wine
Of air and sun, a draught divine—
If I could keep you in my hold—
I think I never should grow old.

RHODODENDRONS.

"Rhodora! if the sages ask thee why
This charm is wasted on the earth and sky,
Tell them, dear, if eyes were made for seeing,
Then beauty is its own excuse for being."

To those who have seen the Rhododendron growing in its pristine luxuriance and beauty in the mountain ravines and shady dells, by the side of some rocky stream, or in thickets on the hillside, the wonder often comes that it is not more cultivated for ornamental shrubbery.

Perhaps its climate range may be too narrow, and this lovely mountain queen of plants, with its rich evergreen leaves and roseate and purple flowers, fades and dies when transplanted from its own rocky dells and chosen seclusion. Its gorgeous blooms seem to be for the lonely wild bird, and the gemmed snake and the agile lizard are its friends and companions.

When we wander through the mountains of Virginia and North Carolina, we fancy our Rhododendrons very beautiful and abundant, but the truth is, that the whole western continent can offer but few varieties, and these abound in but few localities. There are about six varieties found on the western continent:

Rhododendron maximum, the most superb, and found from New England to Georgia.

R. catawbiense, Virginia and North Carolina.

R. punctatum, Georgia and Florida.

R. lapponicum, found in the White Mountains, Mt. Mary, Labrador, and coast of Polar Sea.

R. macrophyllum, west of the Rocky Mountains.

R. Kamskaticum, found near Behring's Strait.

Botanists tell us there are no Rhododendrons in Mexico, California, Isthmus of Panama, nor the coast of Oregon, and none in Africa or Australia, but they love the Himalayas; there is their garden spot of the whole earth. More than forty distinct varieties are found among those mountains, in altitudes ranging from six to eighteen thousand feet above the level of the sea.

I love to think of HOOKER, (*fil*s) the great botanist, making his first acquaintance with the beauties. How he exulted

with each new discovery, and how he named them for dear friends and patrons and for fellow botanists, who would fully understand his enthusiasm.

On Mt. Darjeeling, three hundred and eighty miles from Calcutta, he found eleven varieties, and this in a limited exploration through difficulties thrown in his way by a Rajah hostile to the English. Many of them were epiphytes, growing on Oaks, Pines, Magnolias, or on wet rocks; these had usually white flowers.

Rhododendron Edgeworthii, growing on rocky ledges almost inaccessible to human feet. HOOKER procured his best specimen from a land slide, which brought it down within reach; named it for Major EDGORTH.

R. vaccinoides, growing on moist rocks or in very damp places. Stems no thicker than a goose quill, leaves less than an inch long, of an exceedingly bright green, with pale, yellow spots.

R. camelliæflorum, resembling a Camellia. These were but few of many, but the finest of all he named for the wife of the then Governor General of India, Lady DALHOUSIE.

R. Dalhousii is truly a magnificent epiphyte. The plant stalk grows from five to six feet, high up on the trunks of mammoth Oaks or Magnolias. The corolla is three and one-half to four inches across, of pure, lovely white at first, and much in appearance like *Lilium candidum*, with a lemon odor. In age it takes on a roseate tint, sometimes mixed with spots of orange, not less beautiful. Imagine six or seven of these magnificent flowers on one cluster, with long, exserted styles, and rich, ochreous yellow stamens, perfuming the air for many yards. On Tonglo, a mountain on the Nepalese frontier, Dr. HOOKER beheld *R. Dalhousii*, in all its magnificent luxuriance, at seven thousand feet altitude, where the woods were still dense and sub-tropical, mingling with Ferns, Peppers and Figs. The ground was strewn with its large lily-like flowers, dropping from the enormous Oaks overhead, and mixed with egg-like flowers of a new Magnoliaceous tree, which fall before expanding, diffusing a powerful aromatic odor, more strong, but far less sweet, than the Rhododendron. He says, "So conspicuous

were the two flowers that my rude guides called out, 'Here are Lilies and eggs, sir, growing out of the ground,' a very fair description."

Many varieties of *Rhododendrons* are tall shrubs, and some trees thirty feet high, like *R. argutum*, with silvery underleaf, and *R. Falconerii*, *R. arboreum* and *R. Hodgsonii*. This last is of such tough, unyielding wood that cups, spoons and ladles are made of it by the Bhootan natives, and also the little "Tak" saddle, by which pack loads are slung on the back of that animal. The leaves are used for plates, and serve to line baskets for carrying the mashed pulp of an edible root. A present of butter, or curd, is always sent on this glossy foliage. Its flowers are a bright pink.



RHODODENDRON DALHOUSII.

The flowers are usually small in *R. cinnabarinum*, of a dirty brick red, somewhat iridescent, with blue in the bud.

Perhaps the most interesting of the *Rhododendrons* is *R. nivale*. This singular little plant attains a loftier elevation than any other shrub in the world. Its hard, woody branches, thick as goose quills, straggle along the ground for a foot or two, presenting brown tufts of vegetation, where not a half dozen other plants in the whole wide world could exist. The branches are densely interwoven, very harsh and woody; the stunted shrub spreads horizontally, and is barely raised two inches above the soil. This species, the latest to bloom of all the *Rhododendrons*, and the earliest to mature its seeds, by far the smallest in foliage, and proportionally the largest in bloom, lepidote in vesture, humble in stature, rigid in texture, deformed in habit, is yet the most odoriferous. It is the production of the loftiest elevation of the world and of the most trying climate, for it lives under the joint influences of a scorching sun by day and the keenest frost by night, of the greatest drought followed by a saturated atmosphere of the balmiest calm, alternating with mountain whirlwinds. For eight months of the year it is buried under snow, for the remaining four it is frequently visited with snow and sunshine in the same hour. When the

sun heats the soil to 150° its perfumed foliage scents the air, while it often blooms through the snow, expanding its little purple flowers to the day, and only closing them to wither when fructification has taken place. As the life of a moth may be, it is said, prolonged indefinitely while its duties are unfulfilled, so the flower of this little mountaineer will remain open through days of fog and sleet, until a day facilitates the detachment of the pollen and fecundation of the ovary. This is produced almost wholly by the wind, for though bumble-bees and other insects do sometimes appear at these heights, little strangers enticed by the fervent solicitation of the sun's rays, they are too few in number to influence the operations of vegetable life. The odor of this plant resembles *eau de cologne*. It is found from sixteen to eighteen thousand feet above the sea level, and flowers in June and July, fruiting in September.

In England the Rhododendron is a great favorite. Perhaps the moist climate is favorable to its growth. At Embly, near Romsey, there was, at one time,

a very large plantation. The account of it, given by HOOKER, the botanist, says, "They were planted thirty years ago. The largest number in an exceedingly wet bottom of deep, black peat, full of drains and sheltered with sloping banks of Birch and Fir, but with much Laurel, large Kalmias and Azaleas near the road.

"The shrubs had been cut continually to keep the road clear, and finally made a bank from seventeen to eighteen feet high. They were scattered over the high ground (a dry, black sand) for two miles. There were, perhaps, a dozen of *R. maximum*, about three times as many *R. arboreum* and hybrid scarlets. *R. ponticum* and *R. roseum* seeded themselves to great extent, consequently producing a great variety in shape, size and color of the flowers. The largest single specimen plant of Rhododendron was one hundred and fifty feet round, and twenty feet high. The American species flourished with great vigor, one specimen measured nine and one-half feet in height, and forty-one and one-half feet in circumference."

A. S., *Cincinnati, Ohio.*

SUMMER CAMPING.

I have been much interested in watching the operations of a Belgian family who have camped about two miles from my home, for the last three summers. The head of the family is a window-glass blower, who works from September 1st to June 20th at his trade, and is idle the rest of the year. He came to this country to work at Kent, two miles from the spot where he camps, but after one year was employed at Pittsburgh, Pa., one hundred miles distant, and I suppose became familiar with the country around here during the year at Kent.

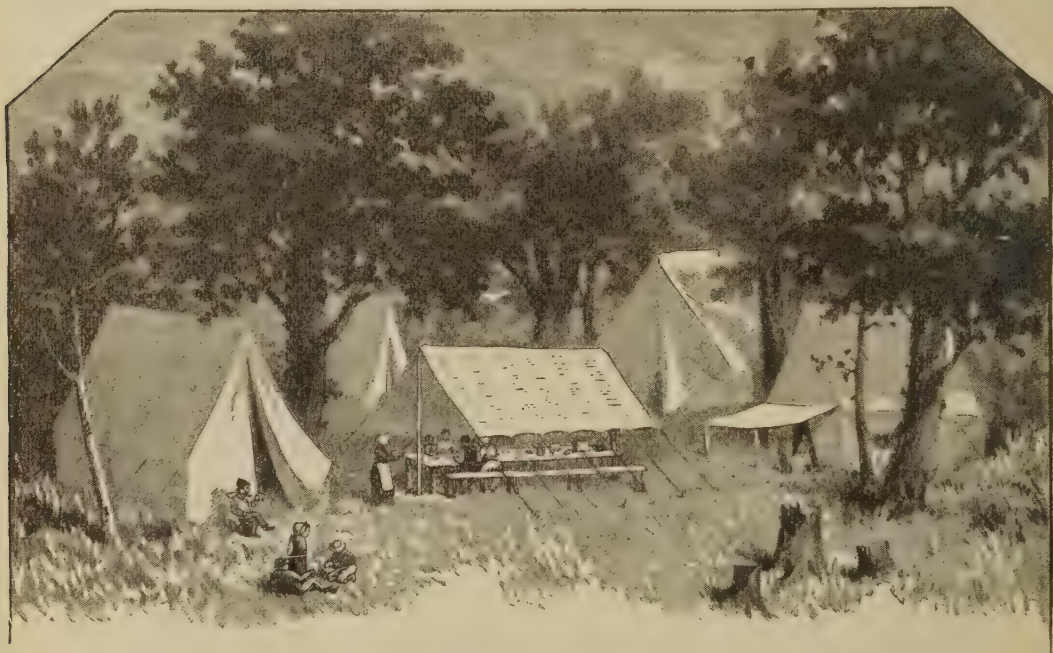
The first year he and a male companion camped two weeks, the next year he brought his family and stayed a month, and last year they spent the whole vacation. This year, they came again as soon as "the fires went out," bringing with them another family and another outfit. Heretofore they have had a single wall-tent, ten by twelve feet, pitched just north of a strapping tree, near the river bank, which only shaded them at mid-day, but this year better

judgment has been used in the selection of a site, and the two families are located in a little grove, with the tents six or eight rods apart. Heretofore the cooking has been done out doors, in a camp kettle protected from the rain by a yard square of old tin roofing, but this year a cooking and dining tent for each family makes a very satisfactory addition to the outfit. This tent is simply a double canvas roof stretched, with the eaves six feet from the ground and securely anchored. A large dry goods box, in which the bedding was shipped, stands in the center to serve as a table, with an extension formed of the top supported at the outer corners by two legs. A smaller box at one corner supports an oil stove, while an extension shelf is made of the top for culinary uses, the inside of the two boxes serving as places to stow utensils, vegetables, &c.

A limited amount of bedding, with huge straw ticks in lieu of mattresses, and a large trunk for a wardrobe, form the principal furniture of the wall tents. Two

or three hammocks swung to neighboring trees furnish places for resting in the day time or sleeping in warm, quiet nights to such of the family as are proof against mosquitoes.

I once spent the early spring months in Pittsburgh, and had occasion to pass often through that part of the city where the glass blowers work and live, and it seems to me that a change from that place to the open country, beside a picturesque river, with pure air and green grass and overshadowing trees, must seem like a change to a better world, to the women and children, at least. As a matter of economy the saving in cost of living, I imagine, goes far toward defraying the cost of car fare and



THE BELGIANS' CAMP.

the camping outfit. Milk, pure and fresh, at four cents a quart, with eggs, butter, chickens and vegetables at least forty per cent below Pittsburgh prices, reduces the cost of setting a table materially, while wild berries and bullheads, mud-turtles and frogs from the river, still further reduces expenses.

The wear and tear of children's clothes is less than in the city, and the necessary clothes for adults are much less expensive than for city wear. Altogether, the example set by these foreign artisans is, I think, worthy of a large following. It is not necessary, however, to go so far away as these people have. They have to pay \$3.75 railroad fare, when they could have found an equally good camping place on the banks of the Monongahela, or some tributary sixty miles above Pittsburgh, which they could have reached by boat for \$1.00. The same is true of many of the smaller cities, Rochester, for example, where a dollar paid for railroad fare will take one up into Livingston county, where there are numerous beautiful camping places, as I know by personal observation. There are other trades besides glass blowing where artisans are not employed in summer, and a cheap and available method of spending the summer in the country and in the open air would be a very valuable boon to them.

As an example, in the city of Akron, seven miles distant from me, two large mower and reaper factories, each year, shut down July 10th, and lie still three months, giving a long holiday to nearly one thousand men. The plan is not, however, shut up to men out of work, but the city worker can, in many cases, avail himself of it.

The Belgians referred to are encamped on the banks of the Cuyahoga River, which empties into Lake Erie at Cleveland, forty miles distant, as the river bends. From their camp to within twelve miles of the city, many equally good camping

places are to be found. A railroad runs up the river valley for twenty-six miles, and early and late trains run so that a tradesman or a mechanic could camp out and still pursue his avocation. What is true of Cleveland is also true of many other cities.

The outfit need not be purchased for a single year, but used year after year until the children become grown, and there is less desire or need for this summer flitting. A suitable place once selected and it could be returned to, as birds return, year after year, to the same orchard and the same Apple tree.

Board floors and some other conveniences could be provided and stored with a neighboring farmer from year to year. Law abiding, respectable people would be welcomed among the farmers, and often times the women and children could find occasional employment in picking Cherries and berries, while the men worked beside the hay wagon or behind the harvester.

The adoption of such an open air life in the hot months would brace up many a pining woman, and save the life of many a teething infant or young child.

L. B. PIERCE, *Summit Co., Ohio.*

ALTERNANTHERAS.

These beautiful foliage plants are most desirable, and are very brilliant used in carpet bedding and ribbon lines, or as borders to beds of mixed plants, or *en masse*. The foliage is tinted and shaded of several colors combined; the plants are dwarf, of not more than six or eight inches in height, very regular and compact habit, and are capable of being made into any design desired. They should be planted from four to six inches apart, and to produce low, round clumps, be clipped and pinched, if necessary.

I never grew these lovely border plants till after I had my greenhouses, so I can not say if they do well in window gardening. In greenhouse growth, cuttings of the tips are taken in August and September, and planted quite thickly in pots or boxes. In January cuttings can again be taken from the old or stock plants freely, and, as is usual, always after plants are cut back, withhold water to a certain extent till they break or form shoots. Then repot and secure new soft growth for another crop of cuttings. In this way several hundred little plants can be raised

from a half dozen stock plants. My garden beds are very gay with them as borders. Their lovely, bright colors contrasting beautifully with the foliage and bloom in the beds. They have grown very thick and make a solid line, forming a complete tuft of color. The most showy of my collection is the new *A. aurea* nana, most beautifully variegated with bright green and yellow. Another variety of same habit, form of leaf, &c., is *A. spathulata*, with leaves tinted carmine and green. *A. aurea* has foliage dark green with blotches of clear golden yellow, the latter predominating. *A. amabilis*, foliage tinted rose; *A. latifolia*, broad, smooth, autumn-tinted leaves; *A. amœna spectabilis*, crimson, pink and brown, very showy and bright. I consider this last as one of the best, it makes a fine specimen grown singly and not too much crowded, so it can assume its peculiar miniature tree form. The plants are not subject to insect pests, and never wilt or grow rusty as some plants do, and will do well without sun, but give the highest colors in strong heat and full sun. MARIGOLD.

PENTSTEMONS.

It is somewhat surprising that these beautiful perennials are not more generally cultivated. They are as easily raised as the Snapdragon, which they resemble in habit. They form an extensive genus of hardy and half-hardy herbaceous plants, natives of Texas, Mexico, Colorado and the Rocky Mountains. They

grow from one to three feet in height and blossom freely all summer and into October. The colors are as varied as those of the Snapdragons. Numerous varieties are obtained from seed. In order to have plants bloom the first season the seed needs to be started early in spring.

M. D. W.

HARDY FLOWERING SHRUBS.

I have often wondered why the hardy shrubs were not more cultivated. There is some excuse for persons who live in rented houses if they do devote their energies to annuals or tender bedders that repay the constant care demanded by a short-lived glory, but how many houses do we see, inhabited by their owners, destitute of all shrubbery, or boasting, perchance, a Lilac bush and a few Roses. One cause may be that the season of flowering in each shrub is short; but, by judicious planting, flowers, of some sort, may be had from shrubs alone from April till October, while the richness of some species is unsurpassed. I never saw a shrub with blue flowers, though one florist advertises a "blue Lilac," but every other tint can be found, from pure white and pale lemon to deepest orange, crimson and scarlet.

In this latitude, North Carolina, the first to flower is the Forsythia. The stiff appearance of the leafless stems detract from its beauty at close inspection, but a well shaped plant is a golden glory against an evergreen background, or even a gray stone wall, when seen from a sufficient distance to be regarded as a whole. In the mild falls of 1885 and 1886 some specimens under my observation produced a scant crop of flowers in October. Of course, that was so much taken from the show of the next spring, but the contrast of golden flowers and purple leaves was beautiful. I do not know if the second blooming is a common occurrence. The Forsythia is not fragrant, but its successor in shedding a mimic sunshine is surpassingly so, the Flowering or Missouri Currant, *Ribe aureum*. A branch in water will perfume a whole room, and, unlike many sweet odors, there is a spiciness about it that never cloy. The Barberry, *Berberis vulgaris*, is another good yellow, too seldom seen, that is as handsome in fruit as in flower. The Corchorus is an old plant too good to be neglected. The flowers are perfect golden balls, suggesting the common name of Globe Flower. The stems are very brittle, making it rather hard to keep the plant in shape. It blossoms from midsummer on.

Two of our natives that would be pleasing in large grounds are the Spice-bush,

Lindera Benzoin, and the Witch Hazel, *Hamamelis Virginica*; the former perfuming the air in the first spring sunshine, and the latter opening its pale stars under the falling leaves and hazy skies of the late autumn.

For white flowers, none are earlier or better than *Spiræa prunifolia*, with its snowy wreath of imitation Daisies. Almost any of the *Spiræas* are good, even the *S. salicifolia*, our common Meadow Sweet, is not to be despised.

If it were hardy, we would all want the English Hawthorn, *Cratægus oxyacantha*, but for those who find its protection during winter too much trouble, our native *C. coccinea* and *C. tomentosa* furnish beauty and fragrance at very small expense of time and care.

If restricted to one shrub, my choice would be some species of *Deutzia*. All are desirable, but *D. gracilis*, with drooping bells, like magnified Lily of the Valley, is my favorite. It only lacks fragrance to be perfect.

From midsummer till frost no shrub is more showy than the hardy *Hydrangea*. It may be new to some that the flowers, if cut just before frost comes, will dry without withering, and form a fine addition to the winter bouquet of grasses and ferns. The *Hibiscus* and *Althæa*, or August Flower, in various shades, from blush white to deep crimson, is another late summer treasure. The flowers are almost equal to Roses. For large grounds our native undershrubs afford a wide variety; the June Berries, *Amelanchier*, some Dogwoods, *Cornus*, the Viburnums, of which the Maple-leaved, *V. acerifolium*, is more pleasing to me, though not so showy as the more frequently planted Snowball, *V. lentago*, the delicate Deerberry, *Vaccinium stamineum*, the exquisite Azaleas, the sweet Clethra, not forgetting our grandmother's favorite, so common we hardly think of them as exotics, the *Syringa* and the Lilac.

For scarlet, I know of nothing that can compare with the Japan Quince. The cinnamon brown of the *Calycanthus*, or Sweet-scented Shrub, is unique. It is rightly called sweet. The odor pervades flower, leaf, bark and wood, even the buried root gives out the peculiar

aroma, compared sometimes to Strawberry, but more like Pineapple.

Many of our shrubs with white flowers have pink or crimson varieties, often equally desirable. Of the colored Lilacs, the Persian is more delicate and finer every way than the common sort.

In old gardens the Flowering Almond, its low stems full of tiny pink pompons, ushered in the shrubbery year. Very different, but equally pretty, is the hardy *Daphne*, with the added delight of fragrance. The Judas Tree, *Cercis*, deserves more attention than it gets; has its ill-name any thing to do with its lack of favor?

The most ardent believer that "the Chinese must go," would surely except the Chinese Weigela, all hardy, varying in color from white to deep pink, and in time of flower from May to July.

The Laurel, *Kalmia*, needs special care to induce it to grow away from its native wilds, but whoever has attended the June Laurel show in our rocky woods, will agree with me that it is worth the effort.

I have omitted the Roses; they would require a paper by themselves. Doubtless I have omitted many other favorites, as I speak only of those I have known. Perhaps some one else will tell of those I have neglected.

LENA LESLIE.

DAHLIAS.

It would be hard to find a grander autumn flowering plant than the Dahlia, or one more varied and rich in coloring; few are so easy to grow, or multiply as rapidly, and yet I am afraid that with all these good points this somewhat pompous, but well deserving, aristocratic old family hardly gets its full share of admiration.

It is true that only the sweep of a wide grassy lawn can set off its perfection, the grand proportions of the large flowering, tall growing varieties, but the Pompons, the Dwarfs or Bedders, ought to be at home everywhere. A good deal of attention has lately been paid to the single varieties, and there is every reason for their popularity, but I prefer the Pompons, always full of blossoms from the latter part of June until frost, small enough and lovely enough for ornamentation anywhere. There is no flower so double or so perfect, that I know of, as these little Pompon Dahlias, and no class of Dahlias so free flowering, which

is saying a good deal. I grew a white one, last year, in the center of a circular lawn bed filled with scarlet *Phlox Drummondii*, and visitors coming up the drive fixed their eyes upon it at once as the handsomest bed on the lawn. Little Fireball, scarlet, and Darkness, almost black, were also much admired. I have given away quantities of the tubers, but they multiply so rapidly that I have always plenty left, and our convenient North Carolina climate is very kind to them, for they stay in the ground all winter, having only a mulch of fertilizer and some evergreen boughs as a protection. They are easily rooted from slips and grow very rapidly; are fond of the broad sunlight, and will bloom better if you water them occasionally, but will not grumble about neglect, which is quite a recommendation to a gardener with his hands full of more capricious flowers. Planted in April they bloom in July and August.

LENNIE GREENLEE.

HARDY PLANTS FOR THE NORTH.

A fact which many an enthusiastic amateur has demonstrated to his "sad satisfaction" is that too often plants included among those set forth by sundry florists as hardy, had, in this inhospitable climate, far better be relegated to the protection of the greenhouse, where they can have the benefit not only of heat and moisture, but of the professional gardener's care. Before condemning the florist,

however, who advertises such plants, we should take into consideration the locality in which he resides, for this may have something to do with the cause of offense. If the publisher of the catalogue be a dweller in Washington, or further south, it is easy to understand that a plant perfectly hardy in that latitude would be a miserable failure in New York or the Eastern States. It is, there-

fore, well, when contemplating the purchase of such plants as shall be able to defy the rigor of our northern winters, to consult the lists of those florists who live at a respectful distance north of MASON and DIXON'S line.

While many beautiful trees, shrubs and plants are to us, "dwellers in the frozen north, unsatisfactory, indeed, and only to be kept in existence by such care as renders them more of a nuisance than a blessing, there is yet such an array of desirable hardy varieties to choose from as should satisfy the requirements of any reasonable individual, and render his garden a delight from early spring until frost closes the scene. Of the flowers adapted to this climate one of the first which greet us after "the cold, cruel winter" is that tried and trusty old friend of our grandmothers, the Hyacinth, with its band of gorgeous allies and confrères, the Tulips. The former with the sweet breath of spring, the latter with their myriad brilliant hues, gay representatives and descendants of their aristocratic ancestors, who, in the days of the Tulip mania, were "worth their weight in gold."

The Sweet Violets are among the most charming flowers of spring-time, fit companions for the Lily of the Valley, whose name is held so dear wherever the English language is spoken. These floral treasures are hardly gone before the Grass Pinks appear to contribute their share of beauty and perfume, while the Syringa complacently looking down upon its tiny rivals almost extinguishes their fainter efforts by its own powerful though delicious aroma. The Snowball, so popular fifty years ago, still holds its place not alone in the garden but in the hearts of many people, relying on its loveliness and associations alone for its position in public favor, since its bloom, alas, is scentless. This last mentioned fact need hardly be a drawback to its cultivation, as the purple thyrsus of the Lilac and golden blossoms of the Ribes, with their exquisite fragrance, will amply atone for any such deficiency in their *bon camarade*, the Snowball.

A picture of the old fashioned Pæony, with its massive crimson flowers and strange odor, comes up before me this evening, bearing witness in itself to the reason for many a fracture of the tenth commandment in my youthful days

when the huge blossoms in my neighbor's garden used to dazzle my childish eyes, and make such strenuous efforts as only flowers can, to cause in me forgetfulness of the difference between *meum* and *tuum*. "Only old flowers," do you say? But is not that a fact which renders them more dear to us? They are the old flowers which are inseparably connected with the memories of our childhood, that magic period of existence when the life before us looked as bright as the hues of the flowers themselves—the flowers whose fragrance was not sweeter than the hopes of our young hearts. Many of us, without doubt, have seen the brightness of life dimmed by the clouds of adversity, and the hopes of youth fade into "thin air," but the dear old flowers remain just as fair and sweet as ever, and should give us a feeling of thankfulness that they, at least, are real and abiding friends, and just as ready to give our children pleasure as they were to cheer us a quarter of a century ago.

The inhabitants of our ancestors' gardens, however, are not the only plants worth cultivating, for the combined efforts of the botanist and gardener have introduced to the public many others just as beautiful as the friends of our youth. One of the finest of the comparatively late acquisitions is the Arizona Columbine, the *Aquilegia leptoceras chrysantha*. Its large, nodding blossoms, of the most delicate shade of yellow, a color quite rare in desirable flowers, are produced in abundance, not only for weeks but months in succession, and its sweet, though faint, perfume, lends it yet another charm. I have given this Columbine no protection in winter, only to find my neglect rewarded with an increase of bloom the following summer. The ordinary *Aquilegias*, although they can hardly hope to vie with their golden-hued relative, are yet no mean adjuncts to the perennial garden, possessing, as they do, the merit of hardiness and a wonderful range of color and tint, running from white and the delicate shades of pink and blue up to a decided red and a dark purple verging on black. Altogether, the Columbine has many characteristics which commend it to those who wish for plants which produce attractive flowers and are, at the same time, able to care for themselves.

Although the florists' skill has wrought many commendable changes in the favorites of a by-gone time, and the same influence is improving the plants of today, yet it has, perhaps, in few instances, achieved more satisfactory results than in the case of the Chinese Pæony, which is assuredly one of the finest ornaments of the modern garden. The fragrance of its blossoms, their many beautiful shades and combinations of color, together with its handsome foliage, a qualification, by the way, not always to be found in conjunction with the loveliest flowers, and its perfect hardiness, combine to render it one of the most desirable of perennials.

The blue spires of the Delphinium are showy objects in the garden, hardly surpassed in brilliancy by even that queenly flower, the Papaver orientale.

The Digitalis, though less pronounced

in hue, is a very noticeable flower, and now becoming well known in this country.

Few of the late blooming plants are superior to the Perennial Phlox, whose merits are too well known to need rehearsal here, and the same remark will apply to that prince of shrubs, the Hydrangea paniculata.

In fact, the names of plants and shrubs which can be grown with little effort in the Northern States are legion, and to enumerate them all and describe their virtues would require more space than the MAGAZINE could well afford to give, but it is only just to say, in closing, that one of the best autumn flowers is the Day Lily, whose waxen blossoms send forth abundant proof that spring does not monopolize all the fragrance of the floral world.

MRS. LUNEY, *Hoosic, N. Y.*

POLYANTHA ROSES.

Ye editor has frequently called attention in these pages to the Polyantha Roses, but beyond Mr. BISHOP's mention of them in the June number, I have seen no response.

Their general characteristics of entire hardiness, constant bloom, low growth, and perfectly formed clusters of miniature Roses, are too well known to need a recapitulation in this short paper. I have seen much glowing praise of them in catalogues of late, but none that I thought ever did them justice, and if every amateur only knew how easily they grow, either as bedding or pot plants, how specially neat and trim they are for the latter, how quickly they bloom after planting, how richly delicate in perfume and color, I am sure the world would soon be full of Polyantha Roses.

I added three varieties to my stock, this spring, Mignonette, Pacquerette and Perle d'Or. Two weeks after planting they began to bud and blossom, and now are bushy little plants, about a foot high, spreading in habit, and covered with bloom.

Pacquerette is prettiest of the three, and the finest bloomer, flowers pure snowy white, full, and more perfectly formed than any other variety. It blooms in clusters of three or a multiple of three, and is just double enough.

Perle d'Or has beautiful, dainty, perfect buds that make you think of a baby's clenched fist. The buds, when half open, are prettier than the blossom, and just the thing for corsage bouquets or the hair. Color of buds beautiful nankeen yellow, with vivid orange center, each petal tipped white, changing to buff-tinged rose in open flower; very double and well formed.

Mignonette, sweet as its namesake, has very large clusters of small, delicate buds and blossoms, color rose, changing to blush.

These Roses, as a general thing, bloom for me more freely and are more fragrant when shaded from two o'clock suns. It is my theory that almost any fragrant flower, grown wholly in the sun, will by and by lose its perfume almost entirely. But the Polyanthas will bear the sun quite bravely and bloom when the taller and statelier Teas and Perpetuals are burning up. In winter they need no protection whatever, but when the gardener is kind enough to give it, plainly show their gratitude. They love rich feeding as well as other Roses, and might grumble if they did not get it; but who could starve a Rose so brave and hardy, free of bloom, and quickly responsive to all care!

LENNIE GREENLEE.

FOREIGN NOTES.

CHRYSANTHEMUMS.

It is almost impossible, I might say absolutely so, that the finest Chrysanthemums of any section can be grown without the aid of stimulants. Much harm may be done to the plants by commencing to feed them at too early a stage before they had formed sufficient roots to enable them to assimilate the nourishment given in the form of a liquid application or by any other means. It is knowing when to begin and when to leave off that obviates such misfortunes as sometimes happen to collections of plants, while the manner of applying the food is but imperfectly understood by beginners in the growth of their Chrysanthemums. I venture to make these remarks in the hope of assisting those who do not well understand the best sort of stimulants to apply, that the necessary preparations may be made to obtain what is required before the time arrives for using such stimulants. The time to commence is an important point in Chrysanthemum culture.

When the plants are potted in new soil they grow freely for a time if clear water only is given, and the leaves assume a color natural to the variety, but after a time, if nothing but clear water is applied to the roots, the foliage in many instances changes to a sickly yellow and the lower leaves fall off. Many growers recommend the withholding of stimulants until the flower buds are formed, but why, it is difficult to understand, as by that time the nourishing matter in the soil will have been absorbed by the roots, Chrysanthemums being such gross feeders, that some check to the plants must necessarily ensue if manure in some form or other is not given. Some varieties do not set their flower buds until the middle of September, and some even later than that. From this stage to the time the plants are in bloom is much too short a space to allow them a chance of deriving much benefit from the application of artificial support. The plants ought to be fed long before the time arrives for the buds to form so that they may be strong at the critical period. If the plants are not suf-

ficiently fed that they may retain their former vigor, how can they be expected to form strong and healthy flower buds? Weakly plants never produce flower buds of the same quality as stronger plants of the same variety, and if the buds are not produced in proportion to the necessary qualities of each variety, how can the flowers be properly developed? When the plants are growing well, do not let them deteriorate by lack of attention in this point, but keep them advancing. When the pots are sufficiently filled with roots is the proper period to commence the use of stimulants.

It is much better to turn one or two plants out of their pots, that the progress of the roots may be more correctly examined, than to hazard a guess by the appearance of the plants. The time at which the plants received their last shift into the flowering pots, the size of the latter, and the kind of soil used, all tend to make a difference in the time required to fill the pots with roots. Some soils are more favorable to root-production than others. It will also depend upon how the potting was done. Roots come to the sides of the pot more quickly in loose soil than when it is made firm; the varieties grown, also, must be considered. Plants cultivated for specimens will first require attention, owing to their being grown on early in the season. Examples grown in the bush style and intended for conservatory decoration, where good foliage is a consideration of first importance, will also need stimulants early in the season. This applies especially to pompons, Anemone pompons, and single varieties, as they are generally grown in comparatively small pots.

Local circumstances, in some instances, must be taken into account, as well as the means at the disposal of the cultivator in determining what manner of stimulant shall be used, commencing with animal manures, as they are, as a rule, easily obtained, except in the case of those cultivators who reside close to, or in, large towns. Various kinds of liquid manures, such as the drainings from the cow house

and stables, are excellent. I prefer the former, as being cooler than the latter. Where liquid manure cannot be had from tanks direct from the places named, a very good substitute may be had from a heap of mixed manure. The best plan is to throw clean water over the heap and allow the water to soak through the manure, and drain into a pit at the side of the heap. Sheep manure, where it can be had direct from the fields, makes a capital stimulant applied in a liquid form; so also do the droppings from deer or cow manure made in the same way.

The best way to prepare it is as follows: Place the manure in a bag to prevent its being mixed with the water, put the bag in a tub or tank of water and allow it to soak for twelve hours, when the water will be ready for use. And by moving the bag about in the water occasionally a regular supply may be maintained until the manure is exhausted. Soot is almost indispensable to Chrysanthemums; it gives a dark color and robustness to the foliage, which is especially pleasing, as it indicates thorough health. Soot should be applied in a liquid state, placing as much as is required in a fine meshed sack, so that the soot does not wash out into the water, rendering the latter thick, which, when applied to the roots, settles on the surface of the soil, blocking up the passage way for future waterings in the same manner as does the soot when sprinkled dry on the surface of the soil and watered in with clear water. All this choking of the passage way for water is prevented by placing the soot in a bag, as the water soaking through the bag becomes charged with the manurial properties. Guano finds favor with some growers, and is easily prepared, and, when of good quality, is very stimulating; a four-inch potful to thirty-six gallons of water, kept thoroughly stirred when using, is a safe quantity to use. Nitrate of soda used judiciously to strong growing varieties when the pots are full of healthy roots has a quick effect upon the foliage and growth of the plants, and tends to elongate or expand the tissues for the reception of other stimulants more solid; half a teaspoonful, powdered finely and watered in, once in a season, is sufficient for a plant growing in a ten-inch pot. Used in excess of this is a mistake. Plants moderately furnished with roots, owing

to their being weak-growing varieties, or through ill health, should not have any nitrate, or the leaves are certain to be burnt around the edges, thus causing a serious check to growth by a partial, if not a total, loss of many fine roots. Sulphate of ammonia is a capital stimulant when applied judiciously and at the proper time. I have seen plants some of which have lost nearly all their foliage and others killed by its injudicious use. It is decidedly risky to use it in any other than a weak form. The advantage of chemical manures is their easy application, and each cultivator of experience has his own particular kind. Printed instructions accompany each kind, and the manure should not be applied in excess of what is recommended, or a proper test of each kind is not fairly given, and the manure is often blamed; whereas it is more often the fault of the cultivator in applying it that leads to failure.

E. MOLYNEUX, in *The Garden*.

CUTTING, PACKING FLOWERS.

Are not many flowers cut too late, not in the morning alone, though that is a point not to be lost sight of, but at too late a period of their own short career? Since flowers are now so much in demand for the adornment of homes, not only of the affluent, but also, and happily, of the more or less humble, in whose gardens they may not be over-plentiful, it is of importance that they be kept fresh and bright as long as possible after they are arranged in dwellings. There are no rooms so richly furnished that are not made more attractive and home-like with flowers tastefully disposed, and none so lowly as to suggest that flowers in them are out of place; elaborate paintings might be, and certain works of art and vestments, but not flowers. Like rays of sunshine they clash with nothing; and neither the rich begrudge the poor, nor the poor begrudge the rich their possession. They cheer and gladden wherever they are, and the wish is natural with the great majority of persons to preserve the charms of flowers in dwellings as long as they can.

When that is the predominant object it is well to remember that each flower under the most favorable conditions has only a certain time to live, and that time is short. When allowed to develop fully, or nearly so, in the garden, half of its period of beauty is spent, and its term of freshness when cut is in that degree limited; or, in other words, the longer its garden life is, of necessity the shorter its room life must be. To have flowers fresh then, over the longest possible period after they are gathered, it is essential that they be cut when young—in the period of childhood, so to say, with nearly their whole life before them, for if left to attain maturity on the plants, their most sparkling, sprightly, juvenile career is over, and nothing remains but steady decline, a term of fading to the end. If pleasure is desirable, and undoubtedly it is, in watching flowers fade, because in instances innumerable they are only received when at their best, or past it, how much

greater should the enjoyment be in observing them grow into beauty—seeing their petals unfold and their colors come without visible movement, yet not the less certainly, like light at the dawn of day? All flowers are, however, not so slow in developing; the Evening Primrose, for instance, which may be seen to open rapidly when the right moment comes. It passes from the bud stage to the full blossom, two or three inches in diameter, in about as many minutes. The interesting process of expansion can be heard, as well as seen, when the divided calyx flies back with a click. It is interesting to watch the birth of flowers, and if we would have them spend their whole life with us in our homes we must cut them on the eve of expansion.

Some kinds of flowers when cut in the advanced bud stage open as well in water as they do on plants, and last as long if not longer. They may not become quite so large as when supported with nutriment from the roots, but that is not a matter of the first importance. If form, color and freshness are combined, flowers answer all the purposes for which they are required in vases, and the prolonged term of beauty is ample compensation for a trifling deficiency in size. Everybody knows, or ought to know, that if spikes of the *Gladiolus* are cut and placed in water when the lower buds show color all those above them will expand nearly or quite as certainly as if on the plants, only, as intimated, the flowers may be smaller. That circumstance is of great importance in packing, for not only can far more spikes be arranged in the bud than in the flowering state in a box, but in the former case there is no crushing of the petals in the transit. It is the same with many other flowers, notably those with soft fleshy stems, but those with hard, thin stalks are not amenable to the same treatment, while some again are naturally fugacious. The flowers of most kinds of bulbs cut young, when the first buds are expanding, last long in water, but *Hyacinths* and *Narcissi* are more durable, so to say, than *Ixias* and *Freessias* with their wire-like stems. Late *Tulips* are splendid flowers for large vases, whether in self colors or broken into flames and flakes; but if we wait until the blooms fully expand it is not easy to pack them without injury, while if they arrive at their destination uncrushed their beauty is of short duration, for the first and best half of their life has been spent in the garden; but cut them immediately the buds split and the first streak of color is seen, packing is obviously easy, and if they are kept close in transit, so that moisture cannot escape from them, they expand in water with certainty and freedom, and continue attractive for a fortnight or three weeks. This year some buds were cut and placed in water in a room and the blooms expanded, keeping fresh even longer than those did that were left on the plants in the garden.

German *Irises* are magnificent flowers for vases, and are represented in a richness and diversity of color scarcely excelled by any other flowers, while the gold and silver pencilings on lustrous purple and bronze red grounds are chastely conspicuous. But the flowers are large, and if we wait till all, or nearly all, expand on a stem before cutting, not only two or three dozen require a large box to hold them, and when removed from it after a day or night's journey, or both, they are not quite the same as when cut from the plants, and can never be made so; they may be freshened and have a gay appearance for a few hours, but their beauty at the longest is of short duration. Very different is the result when the spikes are cut when the first flowers are showing

color. In this form packing is of the easiest, the greatest number can be arranged in a given space, and placed in water without delay when unpacked, the buds then quite closed, open in succession, and no one will then say that "*Irises* pack badly and are soon over." Some vases filled with them a fortnight ago are attractive, yet simply because the spikes were cut young and the stalks not dried in transit from the garden to the receptacles they now adorn. Single blooms of *Liliums*, such as *L. auratum* or others, are very handsome in shallow dishes, which in various forms are so largely used as to have become "quite fashionable, you know." But how are the expanded blooms to be packed so as to arrive in the best condition after a long journey? It is a thankless task sending fully developed *Lily* blooms a long distance by road or rail, for the risk of injury is great, and at the best their beauty transient; but cut the buds when they open slightly at the tips, and they may be packed like cigars, each in a *Lettuce* or *Spinach* leaf, or embedded in fresh, but not wet, lawn mowings, and if the box is made practically air tight it may be sent by post in the certainty that the flowers will expand when placed in water after twenty-four or even forty-eight hours of incarceration.

Roses sent from country gardens to city drawing-rooms should always be cut young—just as the petals are unfolding; and when they travel in the daytime, as is most likely the case, they should be cut early while the dew is still on them, but not dripping wet, and if arranged so that they cannot be displaced in a close box in which the moisture is retained they will be as fresh when taken out several hours afterwards as when severed from the plants, and far fresher than thousands are before being sent off through having been cut too late in the day and too much expanded. Sent in the advanced bud stage and damp with dew they require no packing to keep them fresh, but something may be needed to keep them firm, and soft green leaves cannot be surpassed for this purpose. Paper, if not damp, should be kept from them, and dry cotton wool is an abomination. When buds open in the daytime, and are not desired to expand on the plants, they should be cut and placed in water in a cool, dark place, and they will be right for sending off the next morning. Exhibitors of *Roses* are quite aware of the advantage of cutting young blooms bespangled with dew, and of the necessity of placing them promptly in water instead of letting them "lie about" to become partially withered—a thoughtless habit on the part of some when collecting flowers for sending away, and fatal to their fresh arrival and long continuance.

Chrysanthemums for decorative purposes when cut in the expanding bud state and the stalks placed in water develop in rooms into most attractive flowers, and with a little care will there do duty for a month. The leaves should be removed from the stalks and flowers except above water, this changed occasionally before it becomes turbid, and a small portion cut off the stalks with a sharp knife for leaving open the sap vessels. If blunt scissors are used the sap vessels are bruised and rendered in a measure inoperative. Wet sand, obscured by foliage, is as good as water, if not better, for keeping flowers fresh, and a few can often be disposed to better advantage than in water alone, the sand holding them in the desired positions.

Some persons add salt, ammonia, and other ingredients to water for prolonging the beauty of flowers. I have not tried any of those supposed aids to floral longevity, and shall be glad to hear if they have

been fully and fairly tested, and with what results. Hot water will freshen fading flowers and withering foliage much quicker than cold will, as any one may prove by letting a number of Mignonette sprays get quite flaccid, then place some of them in cold and others in hot water. These latter will revive long before the others, some of which if very far gone may be beyond recovery in cold water, whereas the hot would have restored them. But how hot should the water be? If the hand can be borne in it for a quarter of a minute it will not injure the stems. This is an old practice, but none the worse on that account, and is worth a trial under the circumstances indicated.

Close fitting tin boxes answer admirably for sending flowers in, and unless these are naturally moist it is well to give the boxes a rinse out, and the confined moisture will keep the contents fresh. Wooden boxes similarly treated also answer well if made as nearly air tight as possible. That is the main point, for the simple and sufficient reason that without evaporation and the escape of moisture out of the boxes there can be no flagging in them if flowers and foliage be packed in a perfectly fresh state. Cut flowers young, cut them early, pack them quickly, and secure them closely; and the fresher they will reach those for whom they are intended, and the longer they will remain attractive when arranged in rooms.

EXPERIENTIA DOCET, in *Journal of Horticulture*.

COPPERAS AS MANURE.

A writer, P. DELACHARLONNY, in a late issue of the *Revue Horticole*, gives an account of some trials in the use of sulphate of iron (copperas) as a horticultural manure. The first instances are those made under the direction of Professor MUNTZ, at the farm school of Vincennes, France.

A solution of one per cent. of sulphate of iron was used; the quantity corresponded to fifty-eight pounds per acre.

On equal lengths of rows the increase was ten per cent. of Dwarf Beans, and within a fraction of ten per cent. on Carrots.

From some other trials there was reason to think that a second watering would have been still more beneficial, and this opinion is confirmed by an experiment made by M. FISCHER, Presi-

dent of the Section of Horticulture, at Chaillevois, in which an increase of thirty-six per cent. of crop is noted by use of two hundred and seventy pounds per acre.

On both of these trials the spaces occupied by the crops and their weight were accurately determined.

Other instances are given. One is a dose equivalent to thirteen hundred pounds an acre on a plat of Peas and other vegetables. The Peas pushed with extraordinary vigor and grew to a gigantic size, and the crop was very abundant; the other vegetables presented an equally remarkable development.

Another, some Lettuce upon the copperas was used at the rate of eight hundred pounds per acre; the plants were very beautiful, and leaves very erect.

Another case is the successful use of it on a plat of Strawberries.

Several instances are given of its use on vines with the most beneficial effects, especially on some that were greatly enfeebled and supposed to be in a dying condition, and others whose leaves had become a sulphury yellow, indicative to vinyardists of lingering disease; in the former case the vines took on a new growth, and in the latter the foliage became perfectly green.

Its good effect on Pear trees is noticed, in one case transforming by its action fruits that were formerly hard and gritty. Roses, Geraniums, Violets, and other plants are mentioned as receiving benefit from its use on them.

The conclusion is that copperas can be employed to advantage on garden crops at the rate of two hundred and fifty to nine hundred pounds per acre, using it in a solution of one and one-half per cent., and repeating the employment three or four times.



PLEASANT GOSSIP.

VARIOUS QUESTIONS.

How should the Candidum Lily be treated in order to be successful? All I have planted so far have been a failure.

What are "bower beds?"

My Auratum Lily bloomed this spring for the first time, and the gold bands were very indistinct, in fact, hardly showing at all. Why?

I have had, for the past two seasons, an annual climber with foliage much like the common Morning Glory, but a lighter green, and octagon-shaped leaves, bearing small red flowers, almost like the Cypress Vine, only a duller red, which remain open all day. Can you tell me what it is? It was given to me under the name of Red Morning Glory.

Is salt a good fertilizer for Roses, and, if so, when and how should it be applied?

AN OLD SUBSCRIBER.

Candidum Lily transplanted early in autumn will succeed best—if possible, plant this month.

We have never heard the term "bower beds."

The band or stripe in the petals of the Auratum Lily are variable, showing much more in some than in others. As the plants, in their original state, increase far more by seeds than by offsets, there is an indefinite variety of them, differing as much as other seedlings.

The climber described is undoubtedly an Ipomœa, but without a further knowledge of the plant it is impossible to say what species.

Salt has no reputation as a manure for Roses. For this purpose there is nothing better than old stable or cow manure.

DOUBLE PHLOX—PEAR BLIGHT.

Among my plants of dwarf Phlox I discovered one, the flowers of which has ten petals instead of five. I believe, if properly handled, it could be brought out double. It is rose colored with white eye, very fine.

What can I do to stop my Pear tree from dying?

W. S. P., *Allegan, Mich.*

Save the seeds of this plant of Phlox, and sow them next season, and if any of the seedlings have more than the usual number of petals preserve the seeds again. By so continuing a number of years it is possible that you may obtain a strain which will bear a considerable number of double flowers.

There is no known preventive of the destructive fire blight in Pear trees. The

best treatment is to cut away the diseased branches, cutting into apparently sound wood, some distance below where the wood appears dead. Burn the diseased portions that are cut off. The treatment is palliative only, and the disease may continue to spread, or, as is sometimes the case, it may be checked by the operation.

TROPICAL GARDENING.

Perhaps a little of my experience in tropical gardening may be acceptable to E. C., of Piura, Peru, who wrote in the July number. When he mentions *Portulaca* and *Amaranthus* collapsing in the manner he describes, it struck me that if your correspondent likes to knock his brains against what little I have, we may together be able to trace the cause of it.

Now, here in Jamaica, nearly 18° north, at the present season, June and July, with the heat at noon between 95° and 100°, accompanied by an exceedingly annoying northeast breeze, which pays us a regular visit daily, from 11 o'clock A. M. to 3 o'clock P. M., doing more harm to vegetation than the hottest sun, yet both the *Portulaca* and *Amaranthus* thrive quite as unconcernedly as the *Pusley* or the Guinea Hen weed.

I have grown the following plants repeatedly, and have had strong, healthy plants nearly in bloom, but they always suddenly collapse in the manner described by E. C.: *Snapdragon*, *Pansy*, *Mignonette*, *Calendula*, and a few others. I have traced the origin to the following several various causes: excessive moisture at the roots, hardness of the soil a few inches below the surface, a white fungus growing on the roots, ants, sudden changes of the atmosphere, small white worms like those found in *Dahlia* stalks, and a host of other nuisances which we have to contend with; but as for stating, at present, which is the chief or primary cause, I am not yet prepared to say.

My method of growing *Portulaca* is this:

I sow the seed in a cigar box, and let the plants remain until the branches appear; I then transplant in a sandy soil with full exposure, and water merely with a spray, morning and evening. I never shade plants that are bedded out, not even in the hottest sun, except for the first day or two after transplanting. I have had Balsams burnt up so much that one would imagine they were dead, yet the next morning they were as fresh as ever, and I am convinced there is more harm done in tropical gardening with the application of fresh manure and excessive watering than there is from any other cause.

It is to be hoped that we shall never have another such a trying season for garden operations as the past one. First we had a continuous five months' drought, then we had the deluge, after the deluge two days of the fiercest sun. Then we had a pantomime of the charge of the light brigade, for my plants were dying in all directions—to the right of me, to the left of me, before and behind me—my Clove Pinks, three hundred strong, resembled the valley of Balaklava, the dead and the dying strewn the ground in all directions, and this is how I saved the gallant thirteen in the heat of the battle. I armed myself with a common table fork and dug deep, stirring the soil around the roots, being careful not to injure or disturb the roots too much. I then got some well dried and well decayed manure, which for once in her life the old hen had done a good thing in scattering to dry, a little of this I placed around the roots of each plant and withheld watering, and to-day my small contingent is flourishing.

A stranger who has never visited Jamaica would scarcely believe the variability of its climate, for instance, plants, like the Fuchsia, Pansy, and others which will not thrive here in the lowlands, no matter how much you coax or pet them, luxuriate at a short distance of ten or twelve miles in the interior. A gentleman told me once that he pruned his Fuchsia with a matchette, and carted away the prunings. I have seen Fuchsias myself, blooming on the Blue Mountains, superior to any that I ever saw in England or America.

The following plants thrive and bloom exceedingly well with me, here in the lowlands: Alyssum, Aster, Balsam, Calli-

opsis, Dianthus, Portulaca, Phlox, Petunia, Nasturtium, Heliotrope, Zinnia, Verbena, Maurandya, Gladiolus, Tea Roses, Chrysanthemums and Dahlias.

At the present season I find that seeds, both flower and vegetable, germinate very slowly, and the seedlings scarcely thrive well; this is especially so with Lettuce. A short time ago I sowed some Lettuce seed in a box, and tended it most carefully. After waiting the usual, or rather, an unusual, time for it to germinate, seeing no sign of it coming up, I threw it out of the box at a tree root, when, judge of my surprise, a day or two afterward in seeing these same Lettuce seeds germinate in profusion, which proves the saying, "Too much pam-pam won't make pick-ning grow big."

I would suggest to E. C., to plant seedlings in a mixture of sand and rich loam, don't allow a particle of manure, mix pure sand and loam, which will not bake after watering, give your seedlings more air and less water. Water only very light with a spray, morning and evening. Should the soil become too dry, plunge the box to half its depth in a basin of water which has previously been placed in the sun to take the chill off, let it remain in the basin only a few seconds. Harden the seedlings when very young by gradual exposure to the morning sun, and place them during the hottest portion of the day where the sea breeze, or cold currents of air, cannot reach them.

WM. SPECK, *Half Way Tree, Jamaica.*

WORMS ON VIRGINIA CREEPER.

What is the name of a curious caterpillar that feeds on the Virginia Creeper? It is about three inches long, has one big eye, and when touched it coils itself up and gives a very audible hiss. It looks like an attempt to imitate a snake.

C. H. G.

The caterpillar here mentioned is that of a species of hawk-moth, *Thyreus Abbottii*, and is frequently found on the Virginia Creeper, on the leaves of which it feeds. The "one big eye" is not an eye, but a glassy-like spot. "This spot," says Professor LINTNER, our State Entomologist, in a late communication to the *Country Gentleman*, "is, beyond question, a marvel of beauty—a brilliant gem, when carefully examined with the aid of a lens, which needs to be seen, for it cannot faithfully be described." The Professor further says: "It has a habit, when

at maturity, upon being touched, of violently throwing its extremities from side to side. The suddenness and energy with which this is done, might well excite alarm and the apprehension that danger lurked in such contortion." The creature is quite powerless to inflict any injury.

A. R. GROTE, A. M., in a late article in the *Canadian Entomologist* regards this habit of the caterpillar as a character of protection and defense, by which it intends to threaten and drive off the intruder. "When disturbed," he says, "the caterpillar of the *Thyreus Abbottii* throws itself by jerks from side to side, and gives out a crepitating noise. It looks then somewhat snake-like."

Of the insect itself, Professor LINTNER says: "The graceful form of this large moth, with its excavated wing-margins, the blending of shades of brown in clouds and lines on its front wings, the contrasting of bright yellow and deep brown on its hind wings, the conspicuous terminal and lateral tufts ornamenting the abdomen—all contribute in making it one of our handsomest insects, which hardly any one can see for the first time without an exclamation of 'how beautiful.'"

The caterpillar may often be seen dying or dead with numerous white cocoons of some parasitic fly, which has laid its eggs upon or beneath the surface of the caterpillar, and which have hatched out and fed upon the body of their host, and finally have woven their cocoons preparatory to their final change to perfect insects.

BORDER CULTURE OF LILIES.

It has been claimed that no garden is complete without its assortment of Lilies. Our own love for them and admiration would sanction this belief, and lead to the trial of many sorts calculated to add not a little to the particular borders of the home garden. But we do not always succeed, indeed, it is the rarity to do so, for too often the soil in which we plant them is not adapted to their success, the position unfavorable, and failure is sure to follow. It is an indisputable fact that imperfect drainage and too shallow planting is another means of failure.

Most of the kinds are perfectly hardy, but require careful selection in planting. Nearly all Lilies grow freely and flower

well if the soil be of a rich, turfy loam, leaf-mold and a little well rotted cow manure, reaching a depth of some two or three feet. This must likewise be freely mixed with sand or enough to make it light and porous. Tough clay soil will not do, but a sandy or sub-gravel soil is much better.

Bulbs should be planted from five to six inches deep for most kinds, and a little distance apart. A pinch of sand or charcoal dust immediately beneath and about the bulb insures drainage, quite a necessary item in its successful culture. A good position is a slightly sheltered nook, protected from the winds and the noon-day sun.

Lilium auratum is a good old standard sort, and one of the most showy. It may be grown in pots, but a clump of it in bloom in the garden is a fine sight. The plants vary greatly in size as well as in the tints of their flowers. A fine old sort is the *L. candidum*, a pure white variety and very fragrant. *L. longiflorum* is another white variety well known. *L. Harrisii* has become generally known during the last few years. It is easy of culture and very beautiful. It has an advantage over others, namely, that bulbs as small in size as a Hickory nut will send up strong stems, flowering freely. Large bulbs produce a proportionate number of flowers to the stalk. Almost every garden in this day boasts of its fragrant White Day Lily, supplying house and table with its fragrant morning offering. The old Tiger Lily, both double and single, find their known place as well. The Wallacei is a fine Japanese variety, with beautiful buff flowers spotted with black. For the Japanese varieties a little salt and lime well mixed with the soil is beneficial.

A grouping of each kind is effective, for grandeur and importance is invariably imparted by gathering in masses. The *L. Harrisii* is an admirable bloomer when potted, and resting during the summer season. No other Lily can carry such distinction during the blooming season. It becomes the queen of the window.

The season for bulb planting is at hand, and those who intend to plant should purchase their bulbs and prepare the site for them. A good plan is to become familiarized with the kinds and culture before purchasing.

H. K.

A GOLDEN PENSEE.

Pansy, or Pensée, is the thought flower. Ophelia says, "there is Pansies, that's for thoughts." Some writers have compared them to the faces of children, calling them Happy Thoughts. In Paris, and in France, these expressive messengers of love were formerly condemned to be chief mourners among all the flowers upon funeral occasions, whether called upon to assist in forming the wreath which bedecked the grave of a baby, or rested as a crown upon the *corbillard* of an emperor,



BASKET OF PANSIES.

prince or statesman. Pillow of Rest, spelled out Pensées in purple and white, as if the other flowers could not spell out a word of love, because not robed in *demi-devil* or half mourning. They were left to speak in their beauty and perfume, but of a pale creamish white or pink color, and could not even grow in the cemetery where all flowers grow well, unless of some subdued tint. It is all changed now, all flowers are invited, no restriction as to color, from the deepest red to brightest yellow, spring up in *Pere la Chaise*, the city of the dead. The funeral car, which was wont to be a terror to the gazing crowd of spectators, with its trappings of woe, is laden down with crowns and wreaths of flowers of every tint. There can be no

more pleasing sight to those who understand it as a new birth than a chariot of flowers passing slowly along with a procession of young and old.

English fashions in flowers cross the Channel, and meet with favor; how could it be otherwise with ten thousand American residents in Paris, whose taste borders ever upon the English, especially in all that pertains to home comfort and adornment. Covent Garden London Market Flower Show had, this summer, the largest display of these flowers ever before known.

The sketch is a basket of every shade of Pansies, from deepest yellow to palest pinkish white, a wedding gift. What could be more appropriate than a basket full of baby faced Pansies? The idea, a Parisian one, of mixing Lily of the Valley and forming a garniture or border of the Pansies. The basket was made of white chenille cord, the ribbon bow of buttercup-tinted yellow satin, of the new shade which WORTH, the celebrated dress maker, set in vogue early in the season. The handle is in the form of a perch for the green parrot, who seems, too, to have a thoughtful consideration of the part he takes in the floral wedding basket. His claw is securely fastened to the handle, and concealed that he may seem to rest in place from choice, or as if trained to the service.

In friendship's garden of flowers, many staunch friends stand boldly forth, as the Flag or Iris. Others, bashfully modest of their affections, bend their graceful heads, as the Fuchsias and Forget-me-nots. The Ivy clings in strong embrace, firm in all storms and weather at and around the stalwart Oak, resisting the rudest shock of time. Flowers of every kind have a significant meaning, and their qualities and language will be found applicable not only to the tastes and moods, but the character of our loved ones. The swarthy savage woman tires of her beads and idols, but revels in the garlands of flowers with which she bedecks her hair. Purple is the color loved by royalty, red and yellow by the artist. White by savages, purity felt in their savage nature by flowers expressed. The Salvation Army, red coated soldiers of the cross, with Pansies in their button-holes, marched through the streets of London, last week, keeping

time, with measured and not ostentatious step, to the music of a military band. There were old and young men, old and young women. It would seem they invited mention in this letter by wearing Pansies. Business men laughed at their gaudy attire, but stopped to look, and though differing in opinions on religious conviction, were heard to say, "Red coats and Pansies; but they have honest faces." Policemen, who never unbent before, unless it might have been to club an unemployed, were awed to respectful consideration, and followed the army silently.

Germany's sad loss, remembered and regretted, but "*Le Roi est mort vive le Roi*," is the manifested sentiment, and attention is directed to all which affects the social and political life of the new boy Emperor, whose favorite flower has not yet been manifested; perhaps he loves them all too well to give or manifest a preference.

A basket of Vichy Roses are on exhibition at the Madeleine Flower Market, inexpensive and most gorgeous, being of the pink and red tint, La France and Prince de Rohan.

Pond Lilies in large bunches bring large prices, disappointing, as they remain closed and never fully open. They are used in large round, red Bohemian cut glass bowls as a center piece to the dinner table, and half opened, as they usually are, become the true *pièce de résistance*, which graces every Parisian dinner, whether it be of fish, fowl or flowers.

Saxon table linen, the high *mode-mode* in Saxony, is all one learns of the shopkeeper, resembles shimmering satin, it don't look like damask linen, is not expensive and is of that delicate *écru* tint so desirable for tea table-linen. The new Strawberry dishes made at Vienna, one side for berries, the other for sugar, and a receptacle for a glass sugar spoon, are much in favor.

Silver is English, looks heavy and is troublesome, hard to keep clean and bright. Household comfort and taste has become simplified, and the intelligent and refined matron seeks refined simplicity in her house and table decoration. Flowers and fruit need no costly silver to set them off to advantage.

A dinner can be ordered at the many French restaurants, brought to the door in a little cart, put upon the very table

by the cook who brings it, as if it were the most unimportant matter, and such dishes! it is only a question of money, everything seems at hand, and so politely served that it savors the command with a sauce piquante.

Miniature boats float in the basin of the fountain in the Tuilleries gardens, while childish voices exclaim, "Papa, mine will gain the victory," and he finally catches the inspiration, very contagious, and joins in the boat race, which adds to the infantile pleasure. Pohnchinelle amuses, as ever, the young and old, nurses and babies, maids and children; artists, politicians, all rest themselves in the arbor of Ferns and plants, while Punch and Judy and the policemen have it out, French fashion, during ten or twelve minutes.

All are enticed to participate in the old timed, never wearying child's theater, if only to recall a souvenir of childish confidence and enjoyment in its reality, or witness the joy upon baby faces, as they enter, with ticket in hand, and seek their numbered place, with the same ceremonious form and anxious expectancy of a scenic effect as older children who go to the theater and opera.

Base ball players, in white costumes, toss high and low the ball, while their audience looks on with enjoyment, even the priest will stop and doff his large hat, to rest and watch with keen appreciation the boyish sport.

The hot waffles in demand, glasses of milk, fresh from a dairy, or the patient Durham cow stands to be milked, while the little ones, with cup in hand, assume the role of cup-bearers, claiming and greedily drinking their reward of patient waiting.

Flowers on all sides, borders of Pansies of every hue mark the remnants of the old time garden of empire period. Statues look as familiarly beautiful as last year. That of Comedy and Tragedy wears the same interesting face to all sight seekers who never fail to note its beauty, and on leaving the garden return for another view.

Strains of music, the orchestra half hidden by the trees, delight a large audience, for every chair is occupied, and the women employed to sell tickets of twenty centimes each, four cents for a chair, regret not to have more chairs, for

all are filled. The little birds, familiar by constant feeding of visitors, flit here and there, enjoying and conscious of receiving their share of appreciation.

The Champs Elysées to the Arc de Triomphe seems black with human forms, a surging crowd of promenade lovers, to see and to be seen. The Parisian, doll-dressed little ones, with buckets and paddles, belabor the sand and annoy old bachelors and spinsters who are seated in the rustic chairs, enjoying the day's newspapers, with the dust which they make and delight to annoy. How the little white robed creatures remain in such immaculate robes, digging in sand, is ever a query.

Goat carts go by filled with children, flower women and beggars; it is always their holiday, because charity is the great virtue of the French. There are politicians and artists who give alms year after year to the same *mendiant*, and have been known to go out of the way to pass certain corners where they are a fixture, to not disappoint their beggar.

The churches are adorned with flowers. The altar offerings, very beautiful, in each basket or vase there are Pensées, and generally of the golden tint.

Paris is full of Pensées—golden ones.

ADA LOFTUS.

THE CHINESE PRIMROSE.

I have grown this favorite flower for a good many years, and I like it better and better the more I see of it. It is one of the best, if not the best, flowers we have for winter, and whoever grows it once, well, will be sure to give it a place in her collection ever after.

In order to obtain satisfaction from it, it must be grown well; if not well grown, it is quite sure to give disappointment, and then a complaint will arise that some one has recommended a worthless flower, and there will be no end of fault-finding by the amateur who has "hoped for better things." It is an easy matter to grow this plant well—quite as well as the all-suffering Geranium—when once you know how. And it is not a difficult matter to learn how this is done.

We have some plants that cannot bear to have water stand about their crown, and this is one of them. If kept too wet there; in nine cases out of ten, rot will set in, and when disease has attacked the

roots the plant is pretty sure to die. It will take on a sickly look, the leaves will turn yellow, and there will be a general dwindling away, and an examination of the roots will show you that they are little more than masses of pulp. Quite often the entire crown of the plant will rot off.

Now, all this trouble, I am convinced from my own experience, comes from potting too low. The earth is drawn up around the base of the plant, and often so high as to come in contact with the leaves. This is all wrong. The crown of the plant should be an inch or two above the surface of the soil, and quite out of reach of water. I am aware that most amateurs think it necessary to heap up the earth about it in order to make it stand firm in the pot, but in doing this they are in great danger of injuring rather than benefitting the plant. If it does not stand firm, insert little pegs about it and tie the leaves to them, and secure firmness in this way. The foliage has a soft, hairy surface, and if you have ever noticed it, plants having such foliage are always quite sure to be injured by allowing it to come in contact with moist earth. Decay sets in which often extends to the plant. It is so with the Primrose.

In potting, do not fill the pot with soil to the brim and then put in the plant, leaving a depression about it in the center of the pot, for if you do the water you apply will run in and stand about the plant. Rather take care to see that the soil is lower at the edge of the pot, so that water will run away from the base of the plant. If you do this, and have good drainage, there will be nothing to complain of from overwatering, which many take to be the real cause of trouble.

A good soil in which to grow this plant to perfection is made up of leaf-mold, turfy matter and garden loam in equal parts with plenty of sharp sand added. It does not require a large pot, neither does it require much sunshine. If it can have two or three hours of morning sun it will be content, and I have known it to do well in a north window where it got no sun at all.

Most persons will consider the double white the most desirable variety, but I am inclined to think that the single sorts are best. Certainly they are the freest bloomers. I know of nothing

more charming in mid-winter than a window full of white and pink Primroses, with their great clusters showing well above their pretty foliage. It is a plant that is seldom attacked by insects, and on that account very desirable for the window of the sitting-room. I cover plants when there is danger of getting dusty, as I do not like to sprinkle them, and the soft nature of their leaves makes it a delicate task to clean them without injury. I depend largely on this plant in its different varieties for winter flowers, and it never disappoints me. R.

THE CROWN ANEMONE.

The Crown, or Garden, Anemone, which is much cultivated in climates where the winters are less severe, is comparatively little known in the gardens of the northern and western States. The plate of several varieties in this number, gives a correct idea of their beauty. The difficulty in raising these plants at the north is the sensitiveness of their tubers to frost. If they are planted in the fall and are so protected by means of leaves, evergreen boughs, or litter, that the ground does not freeze, they will come through all right in the spring and bloom abundantly quite early, or soon after the frost leaves. The plant is a native of the eastern shores of the Mediterranean, where the winters are not severe.

It can be very successfully raised as a winter house plant if it is borne in mind that it is a hardy plant in a climate which, though not severe, nevertheless has a winter of some frosts. The most to be feared for it in the hands of most persons is that it will be kept too warm. It should be treated much the same as Hyacinths and Tulips in pots, only, perhaps, giving it a longer rest. Plant a tuber in good soil in a five-inch pot, in autumn, water gently, and stand it away in the cellar. Give attention occasionally, and do not let the soil become quite dry. Leave it where frost cannot get at it, and during the winter it will be making roots. About the first of February it can be brought into the window and given a cool place. It will soon begin to make stem growth, and in time will come to perfection. Do not attempt to hurry by giving it a warm place. As the season advances it should get and can stand

a higher temperature, but it blooms early and passes away early in the spring. Those who have never raised it as a window plant will derive much pleasure from a trial of it, planting a number of the tubers in order to have several of the many pleasing varieties.

WINTERING MONTHLY ROSES.

Will any of your readers kindly tell me of their experience in wintering Monthly Roses in this latitude, 42°? HENDERSON'S method of covering with six inches of earth and sod, tried by an acquaintance, preserved the plants, but gave no flowers the second season. Covering with leaves and straw litter, tried by another, made a fine place for mice to burrow, and the few plants left the following spring perished of the cold in a reaction after a thaw.

My plants are good and strong, *Hermosa*, *Adam*, *Douglass*, *Sunset*, and are filled with blossoms, the soil a well drained one. The great difficulty will, perhaps, be the keeping through the opening spring rather than the winter months. The alternate thawing and freezing destroying the buds and finally killing the plant. This may seem very simple and easy for an experienced person, but it is the uncertainty of knowing what, when and how to do, that is very trying to amateurs.

J. H. B., *Auburndale Mass.*

GLAD AUTUMN DAYS.

The magic voice of spring is gone,
Her emerald blades are turning brown,
The Dandelion's ball of lace
Has given place to Thistle-down.
The Violets that caught the dew
To hide beneath their bonnets blue,
And orchard blossoms, pure and sweet,
Have long since withered in the heat.
The sickle, sharp and keen, has reaped
The meadow flowers, rows on rows
The Barley lies in winnowed heaps,
And aftermath luxuriant grows;
The Sumachs tall, all touched with change,
Form crimson hedge around the grange,
And floating, now, my path across,
On gauzy wings, is Milkweed's floss.
O, Maples, all in scarlet dressed;
O, spike of fiery Golden Rod;
O, purple Asters, everywhere
Upspringing from the sere-grown sod;
O, blue-fringed Gentian, growing tall,
Thou comest when the leaflets fall,
Sweet flowers to bloom 'neath golden haze
That glorify glad autumn days.

MRS. M. J. SMITH.

CARNATION AND CYCLAMEN.

I wish to tell you and your readers of my success with the *Carnation* and *Cyclamen*, for the benefit of those who are fond of these plants.

My *Carnation* is *Peter Henderson*, and it exceeded its description in your *MAGAZINE*. We got it two years ago, from you, and the following winter it had two flowers, and in the spring it was cut back and planted in the garden. It did not seem to grow until toward fall. It was taken up and potted in September or latter part of August, and started to grow at once, and by Christmas it was covered with buds and blossoms; flowers of perfect form, and measuring two and one-half inches across, and very sweet scented and pure.

The *Cyclamen Persicum* was raised from seed received from your house two years ago. We got quite a few plants from the one package. Seed was sown in February, and by the coming Christmas the plants were in bloom and lasted several months. Last summer they took a small rest of their own accord, and by November they were in bloom again, and kept it up all winter. We have counted as many as thirty-four flowers on one plant at one time, and every one admires them so much; they are the only ones in town.

Now those *Carnations* and *Cyclamens* never seem to be troubled with insects or any thing else, and are quite satisfactory plants.

A lady friend of mine gave me six seeds of the *Spotted Calla Lily* about two years ago, and every seed grew, and now they are beautiful and large and spotted. It is very interesting work raising plants from seed, and I have no conservatory or any extra heat either.

MRS. J. B. C.

FLORAL NOTES.

It is with special interest I watch the development of bud and bloom in any thing new to me. Several new *Roses* have blossomed, and of these *Adrienne Christophie* has revealed rare loveliness in its varied tints. The outer petals are cream color flushed at the edges with a delicate shade of lilac. Then the petals deepen into bright canary yellow, with a center of vivid salmon red. It is of fine form and very fragrant.

The new Rose, Marie Lambert, has proved to be of a very vigorous habit, sending forth numerous thrifty shoots with buds. It has given me one bloom, pure white. I can commend this new Tea Rose to all who desire a white, ever-blooming Rose.

The Polyantha or Fairy Roses have long been favorites because of their very free blooming character and perfect hardiness. Mine are as hardy as the Remontants. I have added the Perle d'Or to my collection, and it has blossomed; color coppery yellow.

Arc-en-ciel, a Geranium of recent introduction is true to the florist's description: "The shades are beautifully blended. The three upper petals have soft rose centers, shading into scarlet edges; two petals are scarlet, then rose, then orange near the center. Velvety texture."

Belle Nancienne belongs to this particular class. The center is a rich crimson, outside of this is a creamy band, while the outer margin is of a deep blush; semi-double, camellia-shaped.

The new Abutilon, Eclipse, a cross between *A. Thompsonii* and *A. vexillarium* var., makes a very attractive pot plant, with its variegated leaves of yellow and green, and red and yellow buds all along the drooping branches.

I am having, for the first time, that curious plant, *Farfugium grande*. I set it in the earth for the summer, and it has grown wonderfully. I think its large, round, thick leaves, blotched with yellow, very attractive, and that it will be very ornamental for the winter garden.

MRS. M. D. WELLCOME, *Yarmouth, Me.*

HYACINTHS.

There have been Hyacinths in our garden ever since I can remember, quantities of them, both single and double, pink and blue and Roman white; but the decline of these bulbs, under the best of care, proves the theory, for me at least, that Hyacinths do run out in this country. As I first remember my old bulbs they bore tall, rich spikes, crowded with bloom; now the double ones are nearly single, and there are only three or four flowers to a spike, while the single ones often throw up great clumps of leaves with never a blossom. Only the little White Roman Hyacinth seems to hold

its own and blossom as well as ever. No use to tell me I have not given them the right kind of treatment. I have given them treatment of every kind, in variety and profusion; the bulbs are large and plump and grow and multiply with amazing rapidity. They have simply run out.

So, last year, I gave them up, and procured some new ones, which I planted out in a sunny border. Dainty waxen bells of every shade of pink and purple were quite familiar to me, but I had never seen a yellow Hyacinth, and though I thought "They cannot be so pretty as the others," I selected one from the list and planted it as an incense offering upon the altar of my curiosity.

La Déesse, double white, bloomed first about the middle of March, and the perfectly formed bells with their delicious breath and waxen purity, were beautiful beyond description. The first spike was tallest and fullest, with center of flowers a creamy tint, but I cut it for a sick friend and afterward two smaller spikes appeared, not so double, but perfectly pure, pearly white.

Queen Victoria bloomed a few days later, taller in spike, larger in blossom, and in color rich, delicate pink. It remained perfect a long time, and at the middle of April a second generous spike with a baby one pushed up.

Van Speyk was so very double, and the bells so close together that the effect was rather club-like. The color is rich purple, shading down to pale blue in the center. Notwithstanding its lack of symmetry I am more than satisfied with it.

William III, double yellow, has a spike about ten inches tall. The individual flowers are just large enough and close enough to show well, and the coloring is marvelously lovely. It is catalogued "apricot color," but this description does not do it justice. It is the color of genuine, rich, "Valley of Virginia cream," lighted with warm pink in sunshine, darkened with pale buff in shadow, and the center is sea-shell pink. It has only one flower spike, but the glowing beauty of this one quite contents me.

I have many flowers which cost me much more time, trouble and money than my Hyacinths, but none over which I am quite so enthusiastic. My new ones are not quite so early as the old ones, but they are only getting acclimated, as all

bulbs do when brought from one country to another. I have noticed that it takes Lilies, Tulips and all other bulbs a year or two to quite catch up with our native bulbs in early spring awakening, but they make amends by their rich luxuriance when they do appear. My Duc Van Thol Tulips were quite early this year, blooming the latter part of February, and fairly seeming to warm the cold February sunshine with the vivid coloring.

Quite a number of floral magazines find their way to my table, but the instruction which most of them contain in abundance is often too scientific to be carried out by private gardeners, and I turn with relief from their lengthy technical terms, long lists of botanical names and learned discourse, to the more home-like atmosphere and dainty pages of my VICK'S. I am never afraid to try any new plan of culture recommended therein, because, to use a clinching argument my little sister gave some one the other day, "Mr. VICK is a florist, and he knows." This same little wiseacre declares, with great gravity and earnestness, that "if she ever marries anybody it will be a florist."

LENNIE GREENLEE.

VARIOUS INQUIRIES.

Please inform me, through the MAGAZINE, of the name of the plant I send you herewith. It is a rare wild plant here, and when cultivated is quite ornamental.

In what manner are Roses propagated besides from layers? They don't seem to root well in water, but a small per centage of them will do so.

Are the plants of the Moon Flower sold by florists, and called by different names, the same as the *Ipomœa Bona-nox*? A great many of the seedsmen sell seed of the *I. Bona-nox*, and sell plants of the Moon Flower, and say they are different from each other, but my Moon Flowers answers to the description of *I. Bona-nox* given in GRAY'S *Botany*. The seedsmen from whom I bought them called them *Calonyction speciosum*, and said the other was an inferior plant.

X. V. Z., *Arcola, Ill.*

The plant of which specimen was received is *Liatris pycnostachia*, of MICHAUX.

Roses are propagated in large quantities by cuttings and by budding.

Plants potted and placed in the house in November and December will make a strong growth, which can be taken off and made into cuttings in January and February, and rooted in beds of sand, having heat beneath them.

The Manneti Rose is most used in this country as a stock plant for budding.

The stocks are planted early in spring and by the time the buds are ready for use, which is about when the flower-buds are full formed, or are in bloom, the new shoots of the stocks will be ready to receive the buds.

We can perceive no difference between the Moon Flower and the plant described by GRAY as *Ipomœa Bona-nox*, and believe the Moon Flower now disseminated in the trade to be *I. Bona-nox*, without regard to what seedsmen may say about the latter, or what they may call the former.

A CHEAP FLOWER BED.

It may interest some of your impecunious readers who, like myself, do not wish to invest a large sum in foliage plants, to say that I have had a great success with a very large round bed, about fifteen feet in diameter, by putting in the center four Cannas, then twelve *Salvias* raised by me from seed, a row of Giant Marigolds raised by me from seed, a row of Zinnias raised by me from seed, a row of *Perilla* (Blackleaf) raised by me from seed, a row of Dwarf French Marigolds raised by me from seed. The bed is very full, every inch of it, and the plants are just the right height. It gives the effect of a mound of flowers, costs but a trifle, and will last until frost comes, at least it did last year.

C. H. G., *New York.*

THE WONDERFUL PEACH.

A new variety of Peach which originated in New Jersey, is described in the *Orchard and Garden*. It is a large, yellow-fleshed, freestone variety, ripening in New Jersey the second week in October, its late ripening making it particularly valuable. It is claimed to be an annual bearer. It is called "Wonderful," and is regarded as a boon to the fruit-grower.

BEAUTIFUL ROSE FOLIAGE.

The keeping qualities of the foliage of the Japan Rose, *Rugosa*, are not less remarkable than its beauty. We have kept a sprig of foliage in water for several weeks, and it retains its green and fresh appearance to the last. It will serve for a number of relays of Rose flowers that are lacking in foliage.

OUR YOUNG PEOPLE.

A SECOND - HAND STORY.

IN TWO CHAPTERS.—CHAPTER II.

After the aunt had returned she amused Agnes by telling of a lady she had just seen on the street, complacently leading a pet dog by a silver chain clasped to her wrist, quite unconscious that the creature had taken refuge from the sun underneath her gown, and was trotting along behind with no part of him visible except his tail, which curled up over her skirt to the great amusement of those in her rear.

Agnes then hastened to remind her aunt of the unfinished story, whereupon she resumed its narration at once.

"My new friend," said she, "whom I will call Mrs. S—, went on to give her experience after herself and sister were left so lonely, without relative or a home of their own in the world.

"At the end of one unhappy and loveless year in our guardian's family," she said, "our governess was discharged, despite our tears and pleadings, and we were sent to a private school established by a wealthy planter for the benefit of his own daughters—already young ladies. There were ten others, all grown girls. From the first day of our admittance to the school they seemed, by common consent, to consider us younger ones as appropriate fags—if such a term may be applied to girls. If we rebelled we were brow-beaten and terrorized into submission. There was no one to whom we could appeal for redress. Our Boston teacher—as she wrote us long afterward—dared not dictate to the daughters of her employer outside of their lessons, lest they report her in such wise as to secure her unceremonious discharge."

"Could you not have appealed to your guardian's family?" I inquired.

"It would have been useless," she said, "for madam never felt kindly toward us, having considered us an incumbrance from the first, while our guardian was one of those unsympathetic men who think that if children are properly fed and instructed there can be nothing else to justify complaint.

"To give you an idea of our trials, I will relate one experience. An entertainment was to be given by the girls on a certain evening in their private rooms, of which the teacher and parents were to know nothing. I was reported as having sick headache, and as not wishing to be disturbed—a fabrication which my sister could not deny without incurring an increase of their petty persecutions. All day I was kept busy doing sly errands and bringing in supplies from Old Mammy's cabin, she having been hired to furnish them after the style in which she catered to her master's table at such times as the gentry of the parish were gathered into his spacious mansion for social gayeties and hunting. So I was the unwilling bearer of frosted cakes, puffs, tarts and ices, the while I was hot with indignation at the subjection to which I felt compelled to submit. And yet I decided, as evening drew near, that I could forgive it all if only my sister—then grown so tall and fine looking, I thought—were to be invited to share the evening's pleasure. But she was not, and the last time I handed a package into the room it was already full, and the door was hastily shut in my face.

"Then I rushed off to our own room and cried and stamped and stormed that my sister should be so slighted—she who might rank socially above them all were there any one to speak for her. For myself I did not care. But my sister, she who was my all in the world, and to whom I looked up as to some superior being; she, sitting there that moment, pale with suppressed feeling—too self-contained to cry, too proud to complain; *she* to be slighted by those over-bearing girls. It was too much. I exhausted myself with weeping and refused to see a ray of comfort in the future. Finally, my sister, with her usual tact, said that she really cared very much more for her sister's society when she was cheerful than for that of all the girls in the house, and

that therefore she must confess the evening was proving more dreary than she could have imagined.

" 'Thus rallied, I soon controlled my tears, and resolved to assume cheerfulness thereafter under all conditions, for my sister's sake, as we both had once striven to be cheery for our uncle's sake. Dear uncle!' continued Mrs. S——, 'how clearly I recall him, as sitting propped up, one day, he asked for a drink of cool water from our own hands adding that we'd not have to wait upon our troublesome, sick uncle very much longer, and how we then both broke down, and said, between sobs, that we wanted nothing so much as to wait upon him always—forever—and how he then seemed to realize what an effort we'd been making to keep up a show of good spirits in his presence. Very tender, indeed, was his every word and touch after that. We felt as though his last days were made easier for him after knowing how much we really loved him.' "

Here Mrs. S—— paused, her voice having become tremulous with emotion, while Ditto placed his paws on her knees, whining and coaxing, as though begging her not to cry.

" 'He notices every change in my voice,' she said; 'I do wish he were less observing—it seems so human-like, it is painful.' "

Then, resuming her delicate needlework, she continued:

" 'When, at last, we left school, the comparative freedom of our guardian's home made the change seem almost delightful. My sister was immediately recognized as being quite eligible to enter society, while I, being so near her age, shared her social privileges. We soon learned that a nephew of our guardian's, from Scotland, would shortly be in the family for a long stay as an honored guest, and madam unwisely hinted to me, confidentially, that our guardian looked forward to a lasting attachment between him and my sister.

" 'My sister! What 'prince of the blood,' thought I, could be good enough to steal her away from me. To be sure, he was the eldest son of a viscount, but I recalled that only the sons of dukes and marquises, and the *eldest* sons of earls are entitled to be called lords, while the eldest son of a viscount can only attain

to that dignity should he succeed to his father's place. So, for the present, this coming stranger was only plain Philip Surrey. How my eyes burned for a sight of the superior being whom my sister was supposed to be able to fancy above all others.

" 'When first I met him, with thoughts full of my sister only, my eyes would fain have penetrated to his very soul. The next moment I felt that he, indeed, would prove to be the king to whom her heart's allegiance would be given. But it turned out quite otherwise, for neither one was attracted to the other, my swift decision having only been the verdict of my own heart speaking for itself, while Philip Surrey, on his part, had determined upon his future course at that first meeting, having been obliged, long before, to face the subject of marriage by his iron-willed father, whose selection for his son's wife was odious to him.

" 'But of all this I was ignorant until eventually I found myself beside my husband, in Lord Surrey's castle, Edinburgh. I was treated by Lady Surrey and daughters with dignified politeness, but the viscount's manner repelled and froze me. Not once did he address me so as to call forth a responsive answer from myself. He only saw in me the embodiment of a bitter disappointment. Hence, my surroundings soon became oppressive, and my wounded pride and homesick heart often found vent in tears, when only Ditto was my companion during such hours as Philip devoted to his father while sharing the judicial duties pertaining to the shire (or county).

" 'As a refuge from my thoughts I soon learned to spend much time among the many rare plants that beautified their grounds, and must mention, by the way, that I found at times a solace, almost a panacea for trouble, in gazing at a wonderful display of the American Lotus, *Nelumbium luteum*, which completely filled a large pond devoted to its culture. I had never seen the regal plant before, though the original root-stock had been brought from the United States, and I loved them for their origin as well as for their stately beauty. The leaf-stalks shot straight up nearly two feet above the water, supporting large, circular leaves with concave surfaces slightly inclined, while near each one was a still

taller stalk bearing a mammoth bud or a pale yellow flower, large, double and fragrant. The peculiar pericarp, shaped like an inverted cone, formed the flower center. Nothing could be more superbly beautiful than such a group, I thought. One day, as I sat admiring them, the gardener came to feed the carp, of which there were many small ones in the pond. There had just been a shower, and in the hollow of every leaf and blossom was a little pool of water. As the fish darted about to catch their food they jostled the leaf and flower-stalks, and immediately, all over the pond, were pouring little shining cascades, glittering in the sunlight, making a picture to be remembered.

"Upon our first arrival at Edinburgh, Philip, from day to day, had gratified my eager desire to become familiar with the panoramic splendor which the natural site of the city commands, and also with the ancient part of the city, called Old Town, which in the days of John Knox, and Mary, Queen of Scots, was the Edinburgh they knew, and which is sharply divided from the more modern part of the city by a deep ravine. I saw there many quaint old houses, twelve stories in height, and various dwellings of the nobles of those ruder times which, long ago, became the abodes of poverty. In the New Town, mostly built within the last century, are many buildings of great architectural beauty. In going about its streets with Philip, I became so familiar with certain portions of it that afterward, when I found myself, one morning, restless and unhappy, longing to get outside the castle grounds, I thoughtlessly started off, as I would have done at home, without an attendant, feeling buoyant with the prospect of having a brisk walk, and of procuring a supply of laces and gloves which I had been coveting. I made my purchases with much satisfaction, thinking all the time of my far away sister, as various selections were made with reference to her.

"Then I engaged a trunk maker to send for my trunk, and to put in a moveable, false bottom two inches above the other one, the whole inner surface to be finished to correspond. In the hidden space thus secured, I could pack a great amount of laces and other fine material, which, at home, would have cost me at

least one-third more money. This linen cambric I am making into frills was brought over in that way.'

"But, auntie," interrupted Agnes, "I thought that sort of thing was called smuggling, and considered discreditable."

"So it is, my dear; but Mrs. S— spoke of it to me as though she had no idea of there being any harm in what she had done. I wanted to question her about it, but did not like to intimate that I suspected anything wrong. So she went on to say:

"When I once more entered the grounds of the viscount, I was met by the porter, who said that Lady Surrey and daughters were alarmed at my absence. His manner made me more anxious than his words. Before I could reach my own apartments I was summoned to the presence of Lord Surrey, who thereupon informed me that the freedom of my American manner was odious to him, and that my conduct on that morning was unpardonable—I had not only disgraced myself by going out alone, like a common servant, but had disgraced the whole family, even in the eyes of the porter, the butler and all of their clique.'"

Again Agnes interrupted:

"Is it really considered there, such a breach of correct conduct to go unattended in the open street in broad daylight?"

"In most foreign countries it would be considered unlady-like and immodest, and in this case Mrs. S— had compromised the dignity of her position by *walking* through business thoroughfares where she was liable to be 'jostled by anybody,' as well as by being unattended. You may be sure, Agnes, that the conditions of our own fast-increasing population will soon require the same precaution on the part of those having the care of our girls and women. But Mrs. Surrey went on to say that Lord Surrey wound up his tirade by declaring that he then and there disclaimed and disinherited his son forever, unless he would give her up, and she should return to America, where she belonged. She waited to hear no more, but fled to her rooms in an agony of grief for herself, and of remorse for the trouble she was causing her husband.

"Ah, Ditto, Ditto," she continued, 'it was then you learned to be frightened at

my weeping—when, at last, I could weep. At first, I could only moan, like one who has received a death-blow. I cannot tell you all—can only add that again and again I assured Philip that his release from all obligations to me should be legally confirmed, rather than that he should lose all that country and hereditary training had made dear to him.

“‘In a frenzy of desperation, I prepared’ to recross the Atlantic alone—Ditto and I—and would not listen to Philip’s repeated declarations of loyalty to me. I told him that not until the ocean separated us once more could he truly know his own mind, or I truly believe his calm and more unbiased decision. So Ditto and I came home alone. Poor Ditto, how happy it makes him to hear me speak his name so often.

“‘Well, the result was, that Philip gave up country, family and fortune and joined me here. Thanks to my father and uncle, I had plenty of means, and we made us a home in New York, where Philip is established as an importer of Paisley shawls and other Scotch fabrics. He is to meet me at Buffalo, and together we shall return home. I am very happy—shall shed no more tears—no, not even if death come between us, having suffered a still worse separation. Besides, death is fore-ordained—is inevitable; knowing this, let it come soon or late, we should be prepared for it. I wonder how many yards of ruffling I have—hold this end, please, while I measure.’”

Then the gong sounded and we went to our dinner.

MARIA BARRETT BUTLER.

NOT TO MYSELF ALONE.



“Not to myself alone,”
The little opening flower
transported cries;
“Not to myself alone I bud
and bloom;
With fragrant breath the
breezes I perfume,
And gladden all things with
my rainbow dyes;
The bee comes sipping, every
eventide,
His dainty fill;
The butterfly within my cup
doth hide
From threatening ill.”

“Not for myself alone,”
The heavy laden bee doth
murmuring hum—
“Not to myself alone, from
flower to flower,
rove the wood, the garden
and the bower,
And to the hive, at evening,
weary come;
For man, for man the lus-
cious food I pile
With busy care,
Content if this repay my
ceaseless toil—
A scanty share.”

EDITOR'S MISCELLANY.

THE FALL FAIRS.

It is sometimes said that the day of fairs is past, and that they have outlived their usefulness, but such is not the decision of the people. The attendance at all the great fairs and expositions throughout the country shows that these displays are as popular now as ever, and even more so. In no other way can the comparative merits of breeds of horses, cattle and other live stock be so easily learned; the points of superiority in different styles of implements, machines and fabrics can be quickly perceived and fixed upon the mind. New varieties of fruits, flowers and plants are displayed side by side with those that are older and better known, and their qualities thus learned by practical object teaching. We believe it to be to the interest of the whole community to encourage and take part in these fairs, and especially is it the duty of the best and conservative portion of the community to engage actively in their support in such a manner as to elevate their moral tone and keep them free from every objectionable feature.

There are two great gatherings of this character to be held in this State the present month. The first, in point of time, is that of the International Exposition, at Buffalo, from the 4th to the 14th inst., and from what we can learn at the present time it appears that the managers are putting forth every effort to make it one of the most valuable and attractive shows ever held in this country. The arrangements are very complete, and the entries of exhibitors are in great numbers. This Exposition will, without doubt, be very superior in all departments, and will attract large numbers of visitors from all over this country and Canada.

The Fair of the New York State Agricultural Society is to be held at Elmira, from the 14th to the 22d of this month, and unless the best of indications fail the display at that time will be superior to any thing ever made by this grand society. The entries in the stock line are very large, and there will be gathered a superb collection of animals.

The management of this society is now in able hands and conducive to the best interests of the public. If good judgment, broad knowledge, push and enterprise are potent factors, and they always are, then the exhibition of the New York State Fair, at Elmira, this year, will be one of the most useful and successful ever held.

Although the time of entry of all other articles is now passed, flowers, plants and fruits can be entered up to 10 o'clock, A. M., September 18th. Inquiries, as to the fair and its arrangements, before the opening, should be addressed to the Secretary, J. S. Woodward, at the Agricultural Rooms, Albany, N. Y.

DEPARTMENT OF AGRICULTURE.

The Report of the Commissioner of Agriculture for the year 1887, with the reports of each of the divisions of the department, constitutes an octavo volume of over seven hundred pages. Too much cannot well be said of the high character and the practical value of these reports. Some of the best talent of the country is carefully and patiently working out many of the problems whose solution will materially benefit the farmer, the fruit-grower, the gardener, the stock raiser, and those engaged in allied industries. The colored and lithographic plates and maps are worthy of especial mention, as combining niceties of scientific distinctions and artistic execution. We regret that we cannot say a

good word for the execution of the printing. Such press work is positively discreditable to the government. If such work appeared on a seven-by-nine sheet from the mountain regions of Tennessee, it would be passed as indicating the low state of the art of arts in that region of illiteracy; but to have the great works of the government, which have cost so much, issued in the present inferior style, merely for the want of a competent pressman, or a competent head of the government printing house, is unworthy of the year of grace, 1888, and the government of the United States of America.

AGRICULTURE.

Agriculture in some of its Relations with Chemistry, is the title of a work, in two volumes, of over five hundred pages each, by F. H. Storer, S. B., A. M., Professor of Agricultural Chemistry in Harvard University. Published by Charles Scribner's Sons, New York.

This work is a valuable contribution to agricultural literature. It has been written in the interest of persons fond of rural affairs, and of students of agriculture. It makes no special appeal to chemists or students of chemistry, but to practical farmers interested in scientific agriculture. It will be found a source of helpful information to every cultivator of the soil. This work would be a most excellent text book for a farmers' club, and to go through it by a course of weekly public readings and discussions would be an educational drill that would manifest itself in practice by superior methods in the treatment of lands, cultivation, cropping, care of forage, rearing of animals, manuring, and many other operations. We advise all progressive farmers, fruit-growers and horticulturists to obtain and study this book of science applied to agriculture. It is a most suitable book for every village and school library.

OUR NATIVE FERNS AND THEIR ALLIES.

This very excellent manual, by Dr. Underwood, of the Syracuse University, which first appeared in 1881, has passed to its third edition, each being an enlargement and improvement on the first, by reason of adding to the valuable matter therein contained. The present volume contains about one hundred and seventy pages, and the mechanical execution will satisfy the most critical. Henry Holt & Co., of New York, are the publishers. This is the book which we can, by experience, advise in preference to all others for those who wish to make a careful study of the Ferns of this country. It contains descriptions, critically exact, of all the species and varieties discovered up to the present time. And besides the Ferns, it also treats in a similar manner the allied orders, containing the Ophioglossums, Equisetums, Lycopods, Selaginellas, &c.

The structure, the organs and their functions, and the habits of these plants are all very clearly stated, and in a small compass it is a most complete treatise. Dr. Underwood is entitled to great praise for the faithful manner in which he has prepared this book.

AMERICAN NURSERYMEN.

The American Association of Nurserymen has issued the full "Proceedings" of its 13th session, held last June, in a neat and appropriate pamphlet. It contains a very fine portrait, as frontispiece, of P. J. Berckmans, the President of the American Pomological Society. Portraits of several other prominent horticulturists are given in its pages.